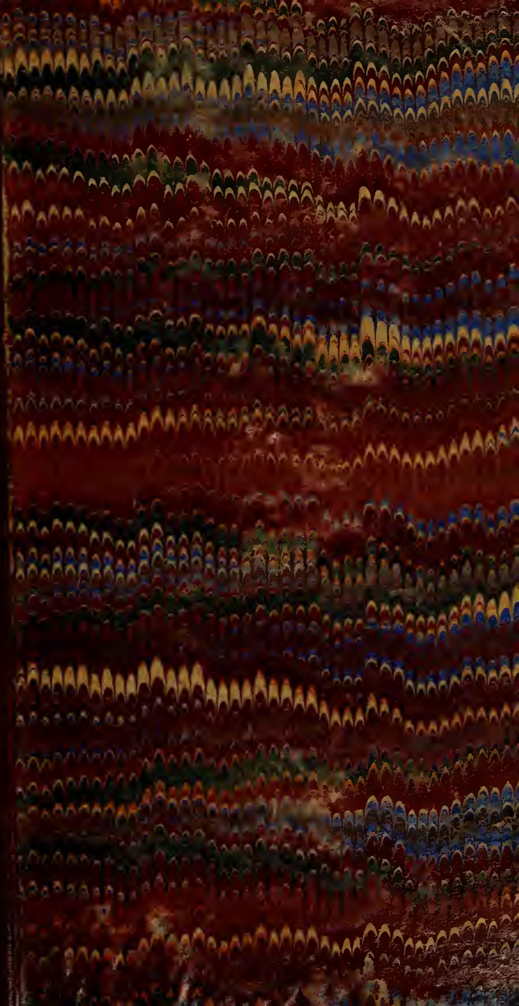

The Library
of the
Division of Health Affairs
University of North Carolina

Digitized by the Internet Archive
in 2010 with funding from
North Carolina History of Health Digital Collection, an LSTA-funded NC ECHO digitization grant project

http://www.archive.org/details/northcarolinamed201887jack

NORTH CAROLINA

MEDICAL JOURNAL.

EDITORS:
THOMAS F. WOOD, M.D.,
GEO. GILLETT THOMAS, M.D.

Volumes XIX and XX.

WILMINGTON, N. C.:
JACKSON & BELL, WATER-POWER PRINTERS.
1887.

LIST OF CONTRIBUTORS.

E. S. Ashe, M.D	Wadesborough, N. C.
Henry T. Bahnson, M.D	Salem, N. C.
Julian M. Baker, M.D	Tarborough, N. C.
Paul B. Barringer, M.D	Davidson College.
L. G. Broughton, M.D	Kenly, N. C.
Thomas S. Burbank, M.D	Wilmington, N. C.
J. Herbert Claiborne, Jr., M.D	New York.
W. C. Dabney, M.D	Prof. University of Virginia.
Francis Duffy, M.D	Newbern, N. C.
J. A. Faison, M.D	Mt. Olive, N. C.
D. B. Frontis, M.D	Wadesborough, N. C.
E. Burke Haywood, M.D	Raleigh, N. C.
R. A. Kinloch, M.D	Prof. Med. Coll. S. C., Charleston.
Cornelius Kollock, M.D	Cheraw, S. C.
W. W. Lane, M.D	Wilmington, N. C.
Richard H. Lewis, M.D	Raleigh, N. C.
E. M. Littlejohn, M.D	———, N. C.
J. B. Mattison, M.D	Brooklyn, N. Y.
W. B. Pritchard, M.D	New York City.
Walter P. Porcher, M.D	Charleston, S. C.
R. A. Patterson, M.D	Aurelian Springs, N. C.
F. W. Ritter, M.D	—————————.
G. G. Thomas, M.D	Wilmington, N. C.
Joe H. Way, M.D	Waynesborough, N. C.
T. B. Wilkerson, M.D	Young's Cross Roads, N. C.
Thomas F. Wood, M.D	Wilmington, N. C.

INDEX.

Abdomen, safe precaution for opening, v 19............. 110
Abdomen, gun-shot wound of, by Dr Parkes, v 20............ 204
Abscess of the antrum, simulating nasal catarrh, v 19.. 7
Aconite, testing fluid extract of, v 19............................ 117
Acid, lactic, in green diarrhœa of children, v 20............... 61
Acid, boric, for sterilizing urine, v 20........ 314
Acetanilid, danger of, v 20..... 286
Address, commemorative, by Dr Weir Mitchell, v 19..... 59
Address of welcome 34th session Medical Society of North Caroiina, v 19......... 233
Agaricus albus, in sweating of phthisis, v 19................... 394
Alamance County Medical Society, v 19....................... 395
Albumen, best test for, by Dr Millard, v 19..................... 309

Alimentation in continued fevers, by Dr F Duffy, v 19, 349
Alcohol in fevers, v 20........... 74
Alcohol and strychnia antagonistic, v 20.................... 62
Ambrosia artimisiæfolia, by Dr Thomas Hill, v 19....... 176
Ambrosia artimisiæfolia in hæmorrhagic fever, v 19... 176
American Journal of syphilography, v 20.................... 100
American Public Health Association, v 20................. 260
American Physicians, Congress of, v 20.................... 322
American Journal of the Medical Sciences, v 20............ 323
Amputation, the first done in North Carolina, v 20......... 181
Amylene hydrate, a new hypnotic (editorial), v 20....... 236
Anatomy Hall, opening of, University of Virginia, v 20............................. 277
Anesthetics during parturition, v 20.......................... 59
Aneurysm, internal, treatment of, v 20............................ 317
Ankle-joint strumous disease of, Dr Kinloch, v 19......... 1
Annual Message of President Bahnson, v 19................. 337
Annals of gynecology, v 20.... 244
Antifebrin, dangers of, v 20.... 370
Antipyretics, the new, v 20.... 107
Antipyrin and antifebrin, in nerve storms, v 20............ 196
Antipyrin for asthma, v 20..... 370
Antiseptic in midwifery, v 19 169
Antiseptic dressing, danger of to manufacturers, v 20 197
Apomorphine in croup, v 20... 126
Arctic America, map of, v 20.. 61
Army surgeons, heroism of, v 20................................ 199
Arsenic arrests iodide eruptions v 20........................ 126
Arterial ligation, prophylactic, for occlusion of vein, v 19................................ 119
Ashe, Dr E S, vesico-vaginal fistula without anesthesia, v 19................................ 293
Asphyxia, in breech presentation, to avoid, v 19........... 121
Asthma, iodide of potassium for, v 20 258
Asthma, Spanish needles for, v 20................................ 370
Atropine in hæmoptysis, v 20 197

B

Bacteria, parasitic relation to saprophytes, v 19.............. 164
Bacteria, Atlantic ocean free of, v 20............................ 62
Bahnson, Dr H T, Annual Message to Medical Society North Carolina, v 19......... 337
Baker, Dr Julian M, malarial hæmaturia, v 20............... 15
Barrenness, causes of and treatment, Dr Madden, v 20.................................. 215
Barringer, Dr P B, address on history Medical School of University of Virginia, v 20 279
Battey, Dr Robert, danger of being a pioneer, etc, v 19... 122
Beaumont, Dr Wm, founder of animal chemistry, v 20, 128
Bergeon's method of treating phthisis, v 20............. 112
Bertie county, organization Medical Society of, v 19.... 395
Blaud's pills, a good formula for, v 19.......................... 332
Board of Health of North Carolina, appointments by Gov. Scales, v 19............ 387
Boracic acid for sterilizing urine, v 20....................... 245
Bozeman, Dr N, preparatory treatment for fistula, v 20, 209
Bright's disease cured by incision in pelvis of kidney, by Dr T B Wilkerson, v 20 329
Bromide of ethyl, v 19............ 47
Bromide for railroad sickness, v 19................................ 300
Burbank, Dr Thos S, vesico-vaginal fistula, v 19.......... 136
Burns, new remedy for, v 20... 248
Byrd, Dr Wm A, death of, v 20 196

C

Calomel, poem on, by Dr Godfrey, M H S, v 19....... 399
Calomel, influence of on decomposition of bile, v 20... 259
Cancer in the mesentery, differential diagnosis of, v 19 78
Cancer, surgical interference with, v 20....................... 101
Catalepsy in a mother and child, v 19....................... 232
Catheter to pass one, v 20....... 374

Cervix, rapid dilatation of, by Dr Wathen, v 19.............. 211
Chisholm, J J, MD, rest for painful eyes; is the advice good? v 19.......................... 14
Chloroform for tape-worm, v 19.. 118
Cholera question, some new aspects of, Dr Shakspeare, v 19.................................... 360
Cholera bacillus a diagnostic test, v 20............................ 372
Cholera at New York quarantine, v 20.......................... 256
Cinquefoil in nightsweats, v 20 335
Cirrhosis, hepatic, in children, v 20.................................... 227
Claiborne, Dr J H, Jr, tinnitus aurium, v 20................ 143
Clothing, a word or two on warm, v 19.......................... 95
Cocaine dosage and addiction, by Dr Mattison, v 19........ 193
Cocaine in stricture, v 20......... 376
Cocaine in solution deteriorates by keeping, v 20...... 233
Cocaine in vomiting of pregnancy, v 20.......................... 371
Cystotomy, suprapubic, by Dr Dennis, v 19...................... 372

Dabney, Prof W C, MD, remarks on so-called puerperal fever, v 20.................... 137
Deep-tubing of the larynx, substitute for intubation, v 19.................................. 221
Dentrifice, v 20......................... 60
Diabetes, treatment of, v 19.... 295
Diabetes, formula for lithium and arsenic, v 20................ 195
Diabetes, by Dr Pavy, v 20..... 19
Diarrhœa of nursing children, contagious, v 20................ 84
Digestion, time required for, test of, v 20....................... 123
Diphtheria, new treatment of, by Dr R A Patterson, v 19 56
Doctor's (the) place in the community, v 19............... 48
Doctor's horse, v 20................. 304
Dropsy, interesting case of, v 20.. 179
Drugs and medicines of North America, v 20.................. 322
Drumine, v 19.......................... 219
Duffy, Dr Francis, alimentation in continued fever, v 19.. 349
Dying, the sensation of, Dr Foxs, v 20.......................... 28

Ear, foreign bodies in, by Dr R H Lewis, v 19................ 296
Eastern Asylum for Insane Colored People (editorial), v 20.. 363
Eclampsia, puerperal, by Dr F W Ritter, v 20.............. 65
Ehrlich's test for typhoid urine, v 20.......................... 376
Ely's balm, formula for, v 20.. 325
Epistaxis, diagnostic value of, v 20.. 94
Ergot in intermittent fever, v 19.. 382
Esophagotomy, external, by Dr E B Haywood, v 19..... 129
Esophagus dilated with a dried peach, v 19......................... 296
Esophagus, complete occlusion of; relieved by trypsin, by Dr E B Haywood, v 20..... 201
Esophagus, stricture of, v 20... 179
Ether, death from, v 20.......... 126
Ethyl, bromide, v 20................ 111
Eulogy paid to the doctors by R L Stevenson, v 20......... 239
Eyes, rest for painful disease of, by Dr Chisolm, v 19........ 14

Fæcal anemia, v 20.............. 356
Faison, Dr J A, evisceration for impacted shoulder, v 20.. 265
Felon, how to abort, v 19........ 123
Felon, proper place to open, v 20.. 166
Fever, antipyretic treatment of, discussion, v 20............ 33
Fever, scarlet, contagion of, v 20.. 230
Fever, yellow, prophylactic inoculation against, Dr Friere, v 20............................ 215
Fever, yellow, at Tampa, v 20, 254
Fissure, anal, and hemorrhoids treated by dilatation, v 20............................ 251
Fistulæ in women, preparation for operation, v 20..... 209
Forests, health-giving, v 20..... 119
Forty-foot beans, obscure symptoms following, Dr Frontis, v 19...................... 139
Friere, Dr D, preventive inoculation for yellow fever, v 20.. 25

Frontis, Dr D B, obscure symptoms following ingestion of beans, v 19....... 139

Gall-stones, some of the rare symptoms of, v 20. 63
Gaseous enemata, administration of, v 19...................... 301
Gastralgia, treatment of, v 20, 198
Gastro-intestinal affections, treated by salol and ice-water, v 20...................... 149
Gelsemium or gelseminum, v 20.................................. 198
Gleditschine (stenocarpine). Will its claims stand? v 20.................................. 251
Gleditschine (stenocarpine), fraud, v 20........................ 324
Glioma of retina, convulsions, extirpation of eye, Dr T F Wood, v 20.............. 72
Gonorrhœa, new treatment for, v 19.......................... 120
Guessing at doses (editorial), v 20................................ 307
Gummata, precocious, v 20..... 91
Gynecology, notes on; uterine displacements, Dr R A Patterson, v 20................ 336

Hair dye, black, v 20.......... 128
Haywood, Dr E B, case of esophagotomy, v 19.......... 129
Haywood, Dr E B, occlusion of esophagus relieved by trypsin, v 20..................... 201
Hæmorrhage, uterine, malarial origin of, v 19............ 295
Hæmaturia, malarial (editorial), v 19........................ 383
Hæmaturia, malarial, in cattle, v 19............................... 397
Hæmatozoa of malarial fever, v 20... 315
Head presentations, causes of, v 20................................ 320
Headache, nervous, treatment of, v 20.......................... 51
Headache, congestive, measures for relief of, v 20...... 246
Heart troubles in typhoid fever, v 20....................... 358
Heart, fatty, rupture of, v 20.................................. 254
Heart murmurs, a new departure in diagnosis of, by Dr Whitla, v 20.................... 350
Hemlock, antidote for, v 19..... 397
Henry, Dr M H, decorated by the Sultan, v 20................ 376
Hepatic stimulants and cholagogues, Dr G G Thomas, v 20 1
High temperature, are its dangers overestimated, Dr Beall, v 19......................... 247
Hobnail liver not diagnostic of drunken habits, v 20.... 61
Hydrophobia, report of commission on Pasteur's method, v 20......................... 78

Ichthyol in erysipelas, v 19... 300
Illuminating oils, report of Prof Simmons on, v 19..... 254
Infantile constipation, v 20.... 243
Intestinal suture, by Dr Otis K Newell, v 19..................... 142
Intestinal surgery, experimental contribution, Dr Senn, v 20........................ 205
Intestine, circular suture for, v 20........ 229
International Medical Congress, delegates to, v 20.... 124
International Medical Congress, ninth (editorial), v 20 189
Intubation of the larynx, v 20 199
Intubation, objectionable features of, v 20..................... 133
Intubation of the larynx, tabular record of, v 20............ 176
Iodoform poisoning, v 19........ 150
" " removed by spirits turpentine, v 20 370
Ipecac in India, v 20.............. 371
Iron, a new test for, v 19........ 175
Iron, tincture, and chlorate potash, v 20..................... 372
Is it right? (for rejected candidates to practice), v 20... 313

Jaundice in typhoid fever, v 19 308
Jones, Dr Jas, v 19 170

Kinloch, Dr R A, strumous disease of the ankle-joint; method of computation, v 19 1
Kollock, Dr Cornelius, cases of ovariotomy, v 19......... 132

Labor, a case of protracted and difficult, Dr G A Ramseur, v 19........................... 50

Lane, Dr W W, notes on New York hospitals, v 19......... 107
Lanolin, v 19......................... 396
Laryngitis, acute, in children, v 19.............................. 214
Laxative currants, v 20......... 257
Leech, how to remove, v 19.... 189
Leonard's physician's daybook, v 20......................... 325
Lemonade, dangerous kind of, v 19.............................. 124
Leprosy, spread of, v 20......... 378
Lewis, Dr Richard H, practical reflections on foreign bodies in the air, v 19...... 296
Leprosy should not be exhibited, v 20......................... 370
License of board of examiners, results for 1887, v 19, 386
Light, artificial, for microscope, v 19......................... 189
Lindmore, Dr C A F, malaria no positive poison, etc, v 20.................................. 344
Limit of the sensitiveness of taste, v 20......................... 372
Lithium carbonate and sodium arseniate and carbonic acid water in diabetes, v 20...... 249
Litholopaxy in children, v 20 253
Littlejohn, Dr E M, report of chairman section in gynecology, v 19..................... 282

M

Malaria no positive poison, but a negatively poisonous condition, v 20................ 344
Malarial hæmaturia, by Dr J M Baker, v 20.................. 15
Malarial prophylaxis, v 20...... 127
" fever, hæmatozoa of, v 20.............................. 315
Mattison, J B, MD, cocaine addiction and dosage, v 19, 193
Maynard, Dr A A, operation for necrosis of the humerus, v 19.......................... 76
Medical Society N. C., reports from sections, v 19, 98; visitors to, v 19, 98; subject of debate announced, v 19, 106; notes on, v 19, 172; minutes of 34th session, v 19, 233; address of welcome, by Mr McDowell 19, 233; reply by Dr O'Hagan, v 19, 235; committees announced, v 19, 237; report of board of censors, case of Dr Williams, v 19, 239; report of Dr Littlejohn on obstetrics, etc, v 19, 240; discussion on, v 19, 241; committees appointed, v 19, 244; report of finance committee, v 19, 245; report on Dr Hyatt's case, v 19, 246; are dangers of high temperature overestimated? v 19, 247; discussion on above, v 19, 248; conjoint session with board of health, v 19, 253; report of Prof Simmons on illuminating oils, v 19, 254; resolutions in regard to NORTH CAROLINA MEDICAL JOURNAL, v 19, 256; report of committee on President's Message, v 19, 257; report of committee on nominations, v 19, 258; report of committee on Pittman prize, v 19, 261; appointment chairmen of sections, v 19, 268; editorial on late meeting of, v 19, 322; examiners, report of board, 1887, v 19, 270
Medical examiners, editorial interpretation of the law of, v 20.......................... 96
Medical chautauqua, v 20....... 255
Medical students German and American, v 20................ 127
Medicine and pharmacy abroad, v 19..................... 87
Members, of Medical Society North Carolina, registration of, v 19..................... 100
Menstruation, pains of, v 20... 101
Migraine, treatment of, v 20... 374
Minor surgery, notes on, by Dr E A Otis, v 19............ 65
Mollin, v 20.......................... 247
Morphine, a new test for, v 20, 129
Morrow, Dr P A, on arsenic, v 19.............................. 396
Myles, Dr R C, makes instruments for Crown Prince, v 20.............................. 364

N

Nasal catarrh, chronic, its relations to phthisis, by Dr W P Porcher, v 19...... 275
Nasal polypi, ingenious methods of extraction, by Dr K P Battle, Jr, v 20......... 226

Needle in the heart, removed, v 20 ... 318
Nettle plants, v 19 ... 332
New York Letter, Dr W B Pritchard, v 20 ... 106
Nitrate of silver in gonorrhœa, v 20 ... 253
Nitro-glycerine, indications for use of, v 20 ... 47
North Carolina Board of Health, expiration of terms, v 19 ... 171
Notes on visits to New York hospitals, by Dr W W Lane, v 19 ... 50

O'Hagan, Dr Chas J, vice-president A M A, v 20 ... 60
Ophthalmia, traumatic, sympathetic, by Dr J H Way, v 20 ... 270
Ophthalmia neonatorum, v 20, 232
Orchitis and epididymitis, nitrate of silver for, v 19 ... 122
Otis, Dr Edward A, notes on minor surgery, v 19 ... 65
Osborne's syrup, formula for, v 20 ... 324
Our advertisers, v 19 ... 100
Ovarian tumor cont'g fœtal formation, v 20 ... 255
Ovariotomy, case of, by C Kollock, AM, MD, v 19 ... 132
OBITUARY:
Dr. Richard Dillard, v 20 ... 370
" E W Germer, v 20 ... 259
" Edward Lindsey, v 20 ... 200
" James A McRae, v 19 ... 272
" Richard Quain, v 20 ... 254
" William Selden, v 20 ... 328
" Valentine H Taliaferro, v 20 ... 254

Parturition, anesthetics during, v 20 ... 101
Pasteur's antihydrophobic inoculations, v 20 ... 159
Pasteur's inoculation, a failure of, v 20 ... 323
Patterson, Dr R A, notes on gynecology—uterine displacements, v 20 ... 336
Patent preparations, supposed composition of, v 19 ... 167
Patent medicines, v 19 ... 124
Perineum, operation for laceration of, v 20 ... 109
Pharmacy, relation to practical medicine, v 20 ... 000
Photographs, instantaneous, v 20 ... 321
Phthisis, the coming treatment of, v 19 ... 98
Phthisis, the dietary of, v 19 ... 315
Pilocarpin in puerperal eclampsia, v 20 ... 255
Pine-wool for dressings, v 20 ... 378
Pittman prize, report on, v 19, 261
" " awarded Dr J M Baker, v 20 ... 15
Placenta after abortion, treatment of, by Dr Walter P Porcher, v 19 ... 160
Potter, Dr F W, uterine hæmorrhage of malarial origin, v 19 ... 294
Pritchard, Dr W B, gastro-intestinal affection, salol, v 20 ... 149
Pritchard, Dr W B, diagnostic surgery, cases, v 20 ... 241
Prize essay, on alimentation in fever, by Dr F Duffy, v 19 ... 349
Proxy vote for superintendent of health, v 19 ... 189
Psoas abscess, treatment of, v 19 ... 397
Puerperal thrombosis, embolism of pulmonary artery, Dr R A Patterson, v 20 ... 70
Puerperal fever, so-called, remarks on, by Dr W C Dabney, v 20 ... 137
Puerperal convulsions, by Dr L G Broughton, v 20 ... 333
Pulsatilla, v 19 ... 281

Quarantine of New York (editorial), v 20 ... 305
Quarantine of New York, Dr Sternberg on, v 20 ... 326
Quebracho in wounds, v 20 ... 377
Quinine, what salt of shall be used hypodermically, v 20, 130
Quinine, the place of in typhoid fever, v 19 ... 25
Quinine, antiperiodic effects of, v 19 ... 46
Quinine in 1694, v 19 ... 121
Quinine in 1694, further notes on, v 19 ... 179

Ravenel, Dr H W, sketch, v 20 ... 125
Rectum, extirpation without destroying sphincter, v 19 ... 113

Illustrations of Clinical Surgery, by Jonathan Hutchinson, FRS, v 20............... 184

Index-Catalogue of the Library of the Surgeon General's Office of the U S A, v 20...... 185

Medical and Surgical Memoirs 1885 to 1886, Containing Researches on the Origin and Effects of Endemic, Epidemic and Contagious Infectious Diseases, etc, by Joseph Jones, MD, v 19...... 392

A Practical Treatise on Diseases of the Hair and Scalp by Geo Thomas Jackson, MD, v 20...... 311

The Library Magazine, v 20... 56

Dose and Price Labels of all the Drugs and Preparations of the US Ph, by C L Lochman. v 20...... 185

The Lomb Prize Essays, v 19, 318

How to Work with Bausch and Lomb's Microtome, v 49...... 174

The Vest-pocket Anatomist, Founded on Gray, by C Henri Leonard, MD, v 20, 56

A Manual of Organic Materia Medica, being aGuide to the Materia Medica of the Vegetable Kingdom, by John M Maisch, PharD, v 20...... 312

On the Pathology and Treatment of Gonorrhœa and Spermatorrhœa, by J L Milton, MD, v 20...... 104

Athothis: A Satire on Modern Medicine, by Thos C Minor, MD, v 19...... 239

What to do in Cases of Poisoning, by Wm Murrell, MD, MRCP, v 20...... 821

The Student's Guide to Diseases of the Eye, by Edward Nettleship, MD, v 20...... 186

A Manual of Weights and Measures, Including the Principles of Metrology, with Rules and Tables, by Oscar Oldberg, MD, v 20.. 55

The Science and Art of Obstetrics, by Theophilus Parvin, MD, v 20...... 52

The Chemistry of Nitrogen as Disclosed in the Constitution of the Alkaloids, by Albert B Prescott, MD, v 20...... 309

The Estimation of Quinine, by Kerren's Method(pamphlet), by E A Ruddiman, v 20...... 311

The Cotton Worm, US, Entomological Report, by Riley, v 20...... 238

Four Months Among Surgeons of Europe, by N Senn, MD, v 20...... 369

The School Teacher, v 20...... 56

A Manual of the Treatment of Massage and Methodical Muscle Exercise, by Joseph Schreiber, MD, v 20...... 183

South-Western Medical Gazette, v 19...... 105

A Text-book of Medicine, by Dr Adolf Strumpell, v 19, 173

Transactions of the Association of American Physicians. Vol I, 1886, v 20... 187

Nervous Diseases and their Diagnosis: A Treatise upon the Phenomena Produced by Diseases of the Nervous System, with especial Reference to the Recognition of their Causes, by H C Wood, MD, LLD, v 19...... 388

Wythe's Physician's Dose-book, v 20...... 57

Text-book of Surgery, General, Operative and Mechanical, by John A Wyeth, MD, etc, v 20...... 54

Outlines of the Pathology and Treatment of Syphilis and Allied Diseases, by Herman von Zeissl, MD, v 19, 103

Saccharine, v 20...... 62

Salol in gastro-intestinal affections, v 20...... 149

Sampson county board of health, meeting of, v 19.... 180

Sanitary science, financial value of, v 20...... 41

Santonin, dangers of, v 20...... 125

Santonin, poisoning by, v 20.. 321

Scarlet fever, great contagiousness of, v 19, 42...... 42

Red-haw for uterine hæmorrhage, v 20 ... 364
Report of the section of gynecology, by Dr Littlejohn, v 19 ... 282
Reeves, Dr Jas E, v 20 ... 371
Resection of the gut, v 19 ... 189
Rheumatism, treatment of in Penn. Hospital, v 19 ... 25
Ribs, the counting of, v 20 ... 133
Ricinus communis, v 20 ... 132
Ringworm, new remedy for, v 20 ... 61
Ritter, Dr F W, puerperal eclampsia, v 20 ... 65
Rushmore, Dr J D, veratrum viride in puerperal convulsions, v 20 ... 291
REVIEWS:
The Alienist and Neurologist, v 20 ... 102
Diseases of the Spinal Cord, by Byron Bramwell, v 19, 174
Paralysis—Cerebral, Bulbar and Spinal, by H Charlton Bastion, MA, MD, v 19 175
A Complete Hand-book of Treatment, by William Aitken, MD, FRS, v 20 ... 368
Medical Electricity: A Practical Treatise on the Application of Electricity to Medicine and Surgery, by Roberts Bartholow, AM, MD, v 19 ... 326
A Practical Treatise on Materia Medica and Therapeutics, by Roberts Bartholow, MA, MD. LLD, v 20, 365
Blakiston's Physician's Visiting List, v 20 ... 239
Ovarian Tumors and Remarks on Abdominal Surgery (pamphlet), by Edward Borck, MD, v 20 ... 310
A Reference Hand-book of the Medical Sciences, edited by Albert H Buck, MD, v 20 ... 310
Reference Hand-book of the Medical Sciences, Vol IV, edited by A H Buck, MD, v 19 ... 328
On a New Craniophore for Use in Making Composite Photographs of Skulls, by John S Billings and Washington Matthews, v 20 ... 184
A Manual of Operative Surgery, by Joseph D Bryant, MD, v 19 ... 101
Treatise on Human Physiology, for the Use of Students and Practitioners, by Henry C Chapman, MD, v 20 ... 308
Text-book of Therapeutics and Materia Medica, by Robt T Edes, AB, MD, v 20 ... 367
Druitt's Surgeon's Vade Mecum, by Stanley Boyd, MB, BS, v 20 ... 237
Etowah: A Romance of the Confederacy, by Francis Fontaine, v 20 ... 187
The Practitioner's Hand-book of Treatment; or, the Principles of Therapeutics by J Milner Fothergill, MD, v 19 ... 327
Gray's Anatomy, Descriptive and Surgical, by Henry Gray, FRS. Drawings by H V Carter. Edited by W W Keen, MD, v 20 ... 366
Lessons in Gynecology, by Wm Goodell, AM, MD, v 20 ... 238
A Practical Treatise on Impotence, Sterility and Allied Diseases of the Male Sexual Organs, by Samuel W Gross, MD, v 20 ... 55
Differential Diagnosis: A Manual of Comparative Semeiology of the more Important Diseases, by F de Haviland Hall, MD, v 20 ... 238
A Treatise on Diseases of the Nervous System, by Wm A Hammond, MD, v 19 ... 102
Sexual Impotence in the Male and Female, by William A Hammond, MD, v 20 ... 186
Anemia, by Frederick P Henry, MD, v 20 ... 187
Principles of Hygiene for the School and for the Home, etc, by Ezra M Hunt, MD, v 19 ... 390
A Manual of the Physical Diagnosis of Thoracic Diseases, by E D Hudson, Jr, MD, v 20 ... 312
Syphilis, by Jonathan Hutchinson, FRS, LLD, v 20 ... 105

Scarlatinal poison in calves, v 20 322
Schweinitz, Dr Emil, v 19..... 121
Sciatica, treatment of by Dr Metcalf, v 19.......... 122
Senn, Dr N, on Lister, Paget, etc, v 20.......... 44
Senn, Dr N, contribution to intestinal surgery, v 20..... 205
Severed digits, v 19.......... 111
Shoulder presentation, evisceration for, Dr J A Faison, v 20 265
Small-pox, false cure, v 20...... 323
Southern Gynecological Association, v 20.......... 326
Squibb's Ephemeris on oil gaultheria, cascara, etc, v 20 256
Spermaceti substituted for cod-liver oil, v 20.......... 323
Specialists, Dr Whittaker on, v 19.......... 281
Specialists, lessons from, v 20, 375
Sphygmograph, value of, v 19, 333
Stenocarpin, the new local anesthetic (editorial), v 20, 233
Stenocarpin sensation, v 20.... 260
Stricture, dilatation of, and treatment of, Dr Otis, v 19 182
Sugar in urine, estimation of, v 20 322
Supra-pubric lithotomy (editorial), v 20.......... 362
Surgeon General and Assistant Surgeon General of North Carolina, v 20........ 253
Surgical affections of whites and negroes, v 20.......... 258
Surgical diseases, comparison of between whites and blacks, Dr Tiffany, v 20... 340
Syphilis from a cigarette (editorial), v 20.......... 99
Syphilis, treatment of, special conditions of, v 20.......... 121

T

Tea-drinking, excessive, v 20 320
Teniafuge, a new, v 20.......... 259
Teaspoons, passage of three by bowels, v 19.......... 333
Texas Courier-Record of Medicine, v 20.......... 360
Thomas, Dr G G, hepatic stimulants and cholagogues, v 20.......... 1
Tiffany, Dr L M, comparison between surgical diseases of whites and blacks, v 20, 340
Tinnitus aurium, by J H Claiborne, Jr, MD, v 20... 143
Toad-fish, death from eating, v 20 325
Tongue mapped out, v 20....... 369
Tracheotomy in diphtheria, v 20 369
Trained nurses for smaller communities (editorial), v 20 235
Trichina in swine introduced by rats, v 19.......... 109
Tuberculosis of the lungs—is it contagious? v 20.......... 112
Tuberculosis infection, a cycle of, v 20.......... 118
Turpentine in chronic catarrh affections, v 19.......... 114

U

University of Virginia, history of the medical department of, by Dr P B Barringer, v 20.......... 278
Urine, detection of medicine in, v 19.......... 398
Urine in tabes dorsalis, v 20... 377
Urine sterilizing with boric acid, v 20.......... 315
Uterine appendages, removal of in Liverpool hospital, v 19 91
Uterine hæmorrhage, consideration of causes of, v 20... 167
Utility of scientific work in practice, by Sir Jas Paget, v 20 287

V

Vaccination and the antivaccinists, v 19.......... 123
Vaginal pruritus in elderly women, v 20.......... 196
Vaseline, a vehicle for hypodermatic injections, v 20... 323
Veratrum viride, in puerperal convulsions, v 20.......... 197
Vesical calculi, how they can be classified, v 20.......... 197
Vesico-vaginal fistula, by Dr Burbank, v 19.......... 136
Vesico-vaginal fistula without anesthetics, Dr Ashe, v 19, 293
Visiting list, Medical News, v 20 325
Visiting list, Blakiston & Co, v 20 000
Vital statistics, and mortuary statistics, value of, v 20.... 49

W

Water, use of at meals, v 20 379

Water, drinking—is chemical analysis a test of purity, v 20 ... 58
Way, Dr Joe H, traumatic sympathetic ophthalmia, v 20 ... 270
Whitehead, Dr Richard, v 20, 196
Whooping cough, resorcin and cocaine in, v 20 ... 196
Wilkerson, T B, MD, incision in pelvis of kidney for cure of Bright's disease, v 20, 329
Willis and George III, v 20 ... 182
Wines of North Carolina, analysis of by Drs Venable and Phillips, v 20 ... 268
Wood, Dr Thomas F, glioma of retina, v 20 ... 72

Yellow fever treated by a layman, v 20 ... 360

Zygadenus Nuttallii, v 20 ... 128

NORTH CAROLINA

MEDICAL JOURNAL.

THOMAS F. WOOD, M. D.,
GEO. GILLETT THOMAS, M. D., } **Editors.**

Number 1. Wilmington, July, 1887. Vol. 20

ORIGINAL COMMUNICATIONS.

HEPATIC STIMULANTS AND CHOLAGOGUES.

The Annual Essay, by GEO. GILLETT THOMAS, M. D., of Wilmington, N. C.

[Read before the North Carolina Medical Society, April 14, 1887.]

Mr. President and Gentlemen:

Before offering you the results of my work to comply with the demand which your choice has laid upon me, let me thank you for your kindness in bestowing the compliment, and while I claim but little originality in the thoughts with which I shall occupy your time for a short space, let me beg your attention to a review of some of the authorities upon the drugs which have been classed as Hepatic Stimulants. The position of the liver in the body, its size, and its peculiarly important role in the general action to the physical economy, have made it always an interesting subject of study of the physiologist seeking to set out in full its normal action and relations, and to the pathologist and physician, when searching into the mysteries of its diseased state. In all the ages of medicine it has been burdened with the blame of more or less of the ills that have marked the course of disease, and opinions as to its functions have changed back and forth with the growth of knowledge and the progress of experiment. Galen, says Murchison, taught that it was the center of animal heat, the point of the manufacture of the blood, the starting point of venous system, and "was, in fact, the central organ of vegetative life." Such was the opinion, more or less changed, for all the years down to Harvey, who partly gave credence to it. That is the source of the bile and that it is engaged in blood-making, and, through its glycogenic action, is a source of heat, are now its recognized properties.

But the experiment of late years give to the organ a duty which is equally as important as these. For it appears, that after the reception of the blood through the portal system, charged with the absorbed products of stomachal and intestinal digestion, it becomes a purifier; for it seems to separate and eliminate such elements of the newly enriched blood as are possessed of properties in their prime state dangerous to life. Of course the material with which tne portal blood is loaded consists of peptones; but their composition is not yet of such a character as to fit them for the purposes of nutrition or to immediately allow of their entrance into the general circulation. Ludwig and Schmidt-Mulheim found that the injection of peptones directly into the circulation were followed by dangerous symptoms, and were indeed poisonous. And it seemed to these experimenters that the actions of these bodies resembled in general the poisonous effects of curare. Brunton suggests that along with the peptones, possibly as a part of them, there may enter as the dangerous portion, those peculiar bodies, ptomaines, generally the prodoct of retrograde action and decay, and possessed of such chemical properties as class them with the alkaloids; for when a solution of peptones is treated with ether and potash it yields a body which seems to be a volatile alkaloid, and if putrid peptones is treated in the same way a solid alkaloid, not volatile, is obtained. That these bodies exist in the body in health as well as disease appears from the researches of Burchard. He found them in normal fæces, as well as in the dejection of patients suffering with diarrhœa and typhoid fever. The same author has found these bodies also in the urine in health as well as in disease—and in proof partly of the presence of some such substance, the paralyzing action on frogs of human urine, resembling that of curare as shown by Bocci, with a train of symptoms exactly following the use of ptomaines from putrid matter, may be quoted. But whether these alkaloidal substances or the inherent properties of peptones as yet unexplained are the efficient causes of the action of the peptones before submitting to changes in the liver, the facts seems to stand that this organ has the power of clearing up the blood of a dangerous constituent, or constituents, and preventing its or their entrance into the circulation general. Foster says he uses the phrase "peptones" because there is reason to think that more than one kind of peptone exist, bodies of such affinity and yet such definite individualism as to make their diverse character evident, and upon this complex constitution may in a measure depend the peculiar properties we have mentioned. But before the discovery of the poisonous bodies indicated, it had been known, through the accurate work of Schiff, Lauterbach and Ludwig, that the liver had the power to deprive the portal blood of a component dangerous to life. Their statement to this effect, according to Brunton, was based on the observation that if the portal vein in an animal was ligatured, death ensued, and that the approach to death and the completed act was marked by the same symptoms that would appear if the animal had been bled to a fatal amount. Ludwig's explanation of this result was that the blood had been dammed up in the veins and prevented from entering the general circulation, and that it was operative as if the animal had been bled to death in his own veins. To dispose of this explanation, and if possible establish another and more tenable one, Schiff and Lauterbach injected into a frog a portion of the blood obtained from a portal vein which had been ligatured, with a fatal result to the frog. But the use of blood from a portal vein not tied did not cause death, and apparently produced no effect. The contradiction seemingly apparent here is disposed of by Foster, in his declaration that the passage of the digested material into the portal radicles is slowly accomplished, and a sufficient quantity of the noxious substance, according to the experiment just alluded to, is not present in the open and moving circulation to affect the life of an animal other than its possessor. But it appears to accumulate, and a period of time greater or less to gather the power of destroying life, when the blood for the injection is taken from a subject in which the portal vein has been tied, and where sufficient time, (in the experience of Ludwig about three hours,) has elapsed for this accumulation to take place. Following the same general idea, and in proof *pro tanto* therefore of what we have thus far set forth, Murchison, in the introductory remarks to his lectures on functional disturbances of the liver, claims it as a settled fact that this organ not only makes blood, but is likewise a blood destroyer, and *in this process it may be*, but certainly in fact it is a blood purifier. Contributing largely to that transformation of albuminous material, reaching it both from the food and tissues, into urea and lithic acid, and beginning thereby the work of elimination of effete matter, which is finally completed by the kidneys, the liver must certainly perform the work of purification. The destruction of fibrin, which takes place in the passage of the blood through the liver, amounts, according to Brown-Sequard, to 86½ ounces daily. Add to this the apparently well-founded assertion that red-blood corpuscles are measurably destroyed by the action of the hepatic function, and white corpuscles increased at the same time, and that out of the blood, most probably from the hemaglobin which is left in the disintegration, is formed the coloring matter of the bile.

Of the glycogenic functions of the liver it is hardly necessary to speak, save to remind you that the performance of this branch of the labor of the organ contributes to the maintenance of animal heat by the supply of an oxidisable material, readily convertible into carbonic acid and water in the lungs; that it assists in cell-growth, as glycogen is always present when cell-growth is in active progress; that it probably is one at least of the sources of fat by transformation, and that some of the certainty of muscular action is dependent upon the sugar made by the liver.

To sum up the work of this great organ, we may say that it receives the blood through the portal system, enriched by the material of intestinal absorption, and burdened with certain waste matter that it has to care for; that it sifts out from this supply all the substances which would be dangerous to life or health, be these substances part of the peptones or such noxious bodies as ptomaines or the products of retrograde change as leucin or tyrosin, which are to become urea and uric acid, that it prepares the rest of material which is brought to it for the great work of nutrition, by restoring it purified to the general circulation, that it makes and sends out the glycogen for its manifold uses in the economy, and that it secretes and excretes bile. In view of this complexity of functions, and of the paramount importance of its continuous action, such drugs as may influence the organ and restore its equilibrium, when it is disturbed, seem worthy of a short notice.

"The notion of a drug which should have a special action on the bile is as old as Hippocrates," says Legg, and after the days of Galen they were called cholagogues. To that portion of the materia medica which includes hepatic stimulants therefore, and cholagogues, we ask your attention. The latter class partakes in most cases of the character of the former and are generally necessary to their completed effect. In a general way it is sufficient to define a hepatic stimulant as a medicine possessed of the power to increase the action of the liver, and in practice this will be still further limited to such articles as will increase the secretion and excretion of bile. For it may be safely declared a rule, that in disorders of the liver, this part of the work will de disturbed, and that the return to a healthy condition from a morbid one will not be expected until there is evidence of a normal secretion and excretion of bile, as the result of medicines exhibited to influence favorably the diseased conditions.

To draw the line between hepatic stimulants and cholagogues we shall say that the latter are substances which if administered to the patient will remove the bile which it finds in the intestines, preventing its absorption and diminishing the quantity in the circulation, the result being, we shall presume, to remove along with the bile such morbid matter as it meets, while the former, the hepatic stimulant, has increased the functional activity of the liver, enabling it to free itself from such morbid material as has existed, and from which it could not free itself unassisted, while at the same time it gives expression to its influence for good by the increased secretion of the bile. As we said before, these drugs cannot be accurately classed always under either head, their properties blending and having the twofold effect, the result being measured often by dosages and other influences, and in using the expressions of the authors from whom we shall quote, the two terms are interchangeably used, cholagogue often indeed including in general the idea of a hepatic stimulant.

In this list we shall follow the classification of Brunton, and we turn first to *nitro-hydrochloric acid.* The power of this drug to act as a stimulant to the biliary function has long been admitted, and Rutherford has given it a place among the stronger ones. Later on we shall allude to the methods for determining the relative strengths adopted by experimenters. The mode of action of this acid is somewhat obscure. None of the experimenters have attempted an explanation of certainty, though by common consent Harley, Ringer, Bruton and Stille mention it. Legg only gives it place as one of Rutherford's determination. Murchison says its power as a stimulant is doubtful. He claims that its action is due rather to an improvement of the gastric digestion than to any specific influence upon the liver. This statement leads us back to the theory that the liver is largely concerned in the relief of the system of any such substances whose presence in the digested matter passing through it as would impair the standard health or affect life, and if the digestion in the stomach can be aided or restored by any agent, the labor of the liver is by this change relieved of an increased burden and can perform its normal functions with normal energy. However, this reference of the influence of the acid to the stomach will not explain the results that, it is claimed, have followed its use for disorders of the liver by means of baths, or the application of it to the region of the liver externally. Horatio C. Wood gives undoubting credence to its power to affect favorably the liver, and says its action when administered internally is sometimes so marked that it is followed by bilious diarrhœa. His confidence in the benefits following its use externally to influence the liver is equally firm. Foster admits that the presence of an acid in the duodenum in the region of the orifice of the biliary duct causes a gush of bile to flow, but he says that *probably* this is a reflex action on the muscular walls of the gall-bladder and the ducts, causing a contraction of these with a dilatation or relaxation of the sphincter of the orifice of the common duct. His conclusion is that the effect of the acid therefore is to cause a discharge of bile and not an increased secretion. The experience of the profession which justifies the use of the acid as a hepatic stimulant will hardly bear out this conclusion.

Next to mercury, the influence of *aloes* on the liver has been more closely studied than probably any other of the articles used for purposes of increasing the secretion of bile. Its power seems to be most marked in small doses—a fact that may find an explanation in the tonic properties of the drug. It is slow in its action, and in its passage through the intestines stimulates them to secretions of intestinal fluid. Measurably these facts may account for its stimulating effect, as in its transit it may be stopped and absorbed in part, to return again with the bile which it has increased in the liver, and together with this secretion exhibiting its full force. This, however, is only a probable action. Stille says of its effects, quoting Widekind, that it primarily augments the biliary secretion, and that its secondary effect, or the consequence of the former, is to purge. Widekind describes its action in doses of four to eight grains as being attended by no distress except occasional eructation, and a warmth and uneasiness in the region of the liver before the commencement of its purgative effect. The evacuations, sometimes attended with griping, consist of several feculent stools of natural constitution, and if several follow one another very closely they exhibit a bilious character, and have more or less mucus in them. The use of the drug by enema and its retention for seven or eight hours, produced a result similar to the one following its exhibition by the mouth, an apparent warrant to the conclusion that its action was due to the increased secretion of bile, which was discharged with it, as the drug could not remain for so long a time in the rectum or lower bowel unabsorbed and if absorbed it must have passed back through the liver and out into the intestines before affecting the result which appeared. The same author's commendation of its use in simple atonic jaundice, when no obstruction to the passage of the bile had occurred, is borne out by the authorities. Widekind claims that its exhibition in such cases is followed by good effects, when saline and other purgatives have failed, and that its cathartic action was not manifested until it returned to the stools their natural color. Ringer and Brunton quote Rutherford as authority for its prominence as a hepatic stimulant, and Rohrig declares that when it was introduced directly into the duodenum of a fasting dog, aloes greatly increased all the constituents of bile, although it purged but slightly.

Podophyllin has been so lauded as as agent for increasing the secretion of bile, that it has even now a place of esteem in many quarters above the mercurials. Its power being admitted, it was eagerly seized upon from this recorded clinical experience in its use, and from the desire to substitute for the mercurials a drug of equal power and divested of the dangers which the followers of John Hughes Bennett's Edinburgh Committee claimed were attached to their administration. But Bennett did not give his sanction to podophyllin, and it was the labors of Rutherford and his colleague Vignal who found that if injected into the duodenum that it increased the flow of bile, and that this flow was still more decided, if bile were already present in the duodenum. Ringer classes it with mercury and recommends its use, especially in minute doses, for the relief of the constipation that often succeeds a diarrhœa in the earlier months of life, when the stools are brittle, clay-colored, or tinged with green. He says no remedy so promptly restores the natural yellow color to the stools and brings back the proper consistency as podophyllin. For this purpose he says a drachm of alcohol should hold in solution a grain of the resin and a dose for the child should be two or three drops on sugar twice or three times a day. Its power seems chiefly expended in the duodenum, though its purgative action affects the whole intestine.

Rhubarb receives the double testimony of both Rohrig and Rutherford, and the latter says of it that it increased the quantity of bile, but did not exhibit any effect upon its composition.

Colocynth first and next to it in orders *jalaps* are listed as powerful hepatic stimulants, the former increasing both the fluid and solid constituents of the bile.

Sodium phosphate, sodium and ammonium benzoates are among the more powerful of the drugs of Brunton's list favorably affecting the increase of bile. The former has found its chief use in children, when derangement of the liver has been indicated by whitish stools, or whitish stools tinged with green. Legg includes with the benzoates the salts of salicylic acid, following for his authority the experiments of Rutherford. The mode of action is very obscure, though it is probable that the peculiar anti-fermentative properties of these articles bear a prominent part in determining their action upon the liver. Bartholow has claimed for salicylate of soda the power of discharging the discoloration of the skin in cases of jaundice, after the bile has returned to its proper channel and the stools have again attained their natural color.

Iridin, euonymin, phytolaccin, colchicin, sanguinarin leptandrin, hydrastin and *juglandin* were all carefully studied by Rutherford. Of these, according to the summary of Wood, iridin purged as well as increased the biliary secretion. euonymin, sanguinarin and colchicin powerfully affected the secretion, but the two first did not purge, the latter did. Of the others, phytolaccin is of use in this class, with double action, but leptandrin, juglandin and hydrastin were all feeble as hepatic stimulants and purgatives. No doubt these drugs deserve a more extended trial than they have received, and that the expectations of Rutherford for their beneficent effects will be more or less realized. Leptandrin, of this weaker class, has been more used in this country, though its place is a secondary one, and within the last year or two hydrastin has been pushed up and a more decided confidence in the result of its exhibition in biliousness claimed for it.

Colchicum has been long accepted as a valuable remedy in gout, and the essential pathological feature of this disease being the excess of lithic acid, its place as a curative agent may be dependent upon its influence upon the liver, by its stimulation effecting the elimination and preparing for excretion in this organ the uric acid that is in excess. In addition and probably as a supplement to its action on the bile, it increases the flow of urine, its solid constituents as well as the watery portions, and aids cutaneous transpiration. It holds its place as a hepatic stimulant undisputed by any of the experimenters

Ipecacuanha is classed among the more powerful of the hepatic stimulants, but its action has been seriously questioned. A very plausible explanation of its action, and one that has gained much support, is that its effects are spent upon the mucous membranes of the ducts, producing a thinner secretion of mucus, opening these channels and allowing the bile to flow out into the intestines more rapidly.

There is to be considered among the stimulants to the biliary secretion a number of influences which probably deserve mention in this connection. The ingestion of food, and the formation of acid chyme which is emptied from the stomach into the duodenum, both independently of each other and by the combined action of the two, increase the amount of bile. Muscular exercise—rapid walking, rowing or running, especially in athletic sports that require much and rapid change of position—all efforts that increase the action of the diaphragm—show a power to increase this secretion apparently, although the cause of the appearance of more of the bile in the intestine, or in a hepatic fistula, was very well explained by the statement that these movements only expelled from the ducts and gall-bladder the stored up bile more thoroughly than would have been done otherwise.

This rapid summary of the list leaves us only to mention, before entering into the discussion of the mercurials, the salines—*Rochelle, Epsom and Glauber Salts.* But the influence of all these over the liver is very slight.

The consideration of the mercurials for the purposes in which we have indicated the use of the other drugs, brings in two prominent thoughts—the experience of the physician and the work of the experimental physiologist. In the discussion of the merits of these preparations of mercury, hardly any assertion has been made that has not been severely criticised and questioned, and out of the discussion grew the valuable works of Rohrig, Rutherford and Vignal, and John Hughes Bennett's Edinburgh Committee. I hope I shall not draw too long upon your patience by offering a concise statement of the arguments in the matter. They seem so full of instruction that a repetition of them ought never to be out of place in such a paper as this.

According to Legg, from whose work on "Bile Jaundice and Bilious Disorders" we shall obtain such statistics as we may present, and to which work we are indebted for much of the information on which we have founded this essay—according to this author, Hermann Nasse, of Marburg, in 1851, was the first to study the effects of drugs, and especially calomel, on the secretion of bile. The flow of bile into the intestines and the quantity appearing with the stools was so difficult of determination that he adopted the plan which has since been used as the only correct one, to settle the questions involved in this issue, that is, the measuring of the bile poured out of a biliary fistula. His plan consisted in feeding a dog on a uniform diet, which was supposed to be bread and potatoes, from the 6th to the 15th of the month, (it was in November) and to each meal carbonate of soda was added. Between the 24th and 27th of the month, within thirty-six hours, ten grains of calomel was given to the dog. On the first day the animal ate but little; on the second the food was untouched at noon but on the third day he ate all that was set before him. The quantity of bile was lessened on the first day, but increased the last two, apparently with the accumulation of the calomel. The amount secreted and gathered from the fistula for eight days before the administration of the medicine showed a mean of 126.6 grs. of fluid bile and 2.88 grs. of solid bile, as compared with the mean of the two last days of the dosing with the calomel of 212.5 grs. of fluid bile and 4.38 grs. of solid bile. This points directly to an increase.

Kolliker and Muller waited until the twenty-sixth day after the fistula was established, and in the forenoon of the day gave four grains of calomel. Five observations in the afternoon showed a decrease of the bile below the normal. Two later experiments showed the bile thick, brownish and lessened in quantity. But Legg does not attach much importance to these results, as the dog was sick, had an exhausting diarrhœa and would only take as food bread and milk.

In 1858 Dr. George Scott set up a biliary fistula in a dog and calculated the amount of bile, fluid and solid, secreted, first in twenty-four hours without calomel, and then in the same period with calomel. Without going into the details of his experiments, the conclusion he reached was that a diminution, and not an increase, resulted after large doses of the mercurial, and that the quantity of food taken did not influence the secretion so as to affect the value of his experiments.

The Edinburgh Committee, under the lead of Hughes Bennett, do not agree with the experiments of Dr. Scott, whose experiments, by the way, were made in the laboratory of Dr. Lionel Beale. They think the decrease in the bile is not as great as he thought it. In beginning their work they set out with a check experiment to prove that mercury would have the same action on dogs as on men, and to this end they injected under the skin of dogs corrosive sublimate. This was followed by a discharge of mucus from the nostrils, fœtid breath and sore gums, and these results appeared alike in dogs in which no biliary fistula had been made and those that had been subjected to this operation ; but in the former lot a profuse diarrhœa ensued, but was less marked or absent in the latter. So far they claimed the effects of mercurials on the dog and man are identical. Trials were then made with blue pill and calomel, the latter being used in both large and small doses, with a result pointing certainly to no increase of the secretion, and probably to a diminution. Corrosive sublimate was used with a like result, but all of the animals seemed to have succumbed early to the effects of the drug, and in none of the cases does it appear that they maintained for any length of time even a moderate amount of strength or health. Next in order of time come the experiments of Rohrig, which were published in 1873. He pursued a different plan from all former experimenters. Previous to his undertaking the work, the mode of management was practically as follows: A biliary fistula being set up in a dog, sufficient time was allowed for the animal to regain his health and the amount of bile passed in a series of days was calculated and a mean established. Then the same series of measuring was followed up after the exhibition of a drug—generally a mercurial—and a mean of these struck. But Rohrig, and after him Rutherford and Vignal, first curarized the dogs and rabbits used for experiments until they were motionless, and to preserve life artificial respiration was practiced. Great regularity was found necessary in the performance of this practice, for it appeared that any change in the breathing led to a difference in the manner of the expulsion of the bile. "A glass canula was inserted into the common duct, the gall-bladder was pressed upon so as to fill the canula with bile, and the cystic duct was clamped to prevent the return of bile into the gall-bladder." Thus all the bile passing through the hepatic duct escaped through the canula. This was carefully collected. The movement of the secretion and its quantity was measured or judged by the number of seconds between the fall of the drops from the canula. Rohrig says that after large doses of calomel the bile will again flow, after it has completely stopped, and he believes that it will increase the secretion if it has only been diminished ; but he does not think its power is in excess of that of sulphate of magnesia, which he claims is a feeble stimulant. As he only made one experiment on the latter point, Legg dismisses the opinion as unworthy of much respect.

In 1875 Rutherford and Vignal published their experiments and the findings of these gentlemen have been taken since as the basis of all the discussions and opinion of the profession since. They only varied Rohrig's method by collecting the bile in finely graduated tubes instead of counting the drops by the seconds. The animals were curarized and treated as in Rohrig's experiments, and the records show these results : The injection of ten [grains of calomel into the duodenum caused an increase of the secretion, the measure two hours before the injection being 3.35 C. C., and two hours just after 4.72 C. C. The result in two other experiments varied from this, as no increase appeared in one of them and a decrease was noted in another. In three other experiments, in one there was no increase, in one a decrease, and in one an increase, but this had begun before the drug was given. The addition of bile to the calomel did not affect the amount secreted. As these injections had been made into the duodenum and had not been subjected to the acid of the stomach, and as it was suggested that probably the influence of this acid on the calomel was to change a portion of it into corrosive sublimate, experiments were made with the bichloride of mercury. Without the addition of bile to the solution of the drug, a small increase appeared; but when this fluid was added in two experiments, in the first an increase was noted, and in the second the result was very marked. In reviewing the opinion of these experiments, that it is the portion of calomel changed by the gastric juice into corrosive sublimate that is the effective part of the drug as a hepatic stimulant, Legg says he does not think the question has been answered, and leaves the point open. We have seen the opinions of these experimenters on the other drugs, which were made in the course of the examination of the action of calomel and the other mercurials. H. C. Wood sets out all these facts and says that these evidences do not warrant any positive deductions as to the effect of purgatives upon the biliary secretion of dogs that are healthy, and that these facts must be laid aside or received with much reserve when we are studying the action of hepatic stimulants on man, and that our conclusions will be more safely based on clinical evidence. As mercurials in health increase the flow of bile, and if it has been suspended or diminished, will renew it or increase it, the conclusion seems to him inevitable that it must have a directly stimulating effect on the biliary secretion. The objection that the increase follows as an effect of the increased peristalsis set up by the mercurial, causing the expulsion of the bile from the gall-bladder and its being swept out of the bowels without absorption, is answered, he claims, by the facts that the color of the action under the influence of a mercurial is restored when it is pale from arrested secretion, and often without producing a diarrhœa. Moreover, a diarrhœa existing with colorless dejections, a change of color following the treatment by mercurials, does not make an increase in the diarrhœa necessary, and there may be a decrease of liquidity after the exhibition of the mercurial at the same time as the improvement is observed in the color. Other drastic purgatives, more potent than the mercurials, fail to accomplish the result that is justly expected of a mercurial. And lastly, a diarrhœa does not cause bile to appear in an increased amount in the dejections. Bartholow does not deny the increase of the bile, but he regards it as a pathological phenomena. While he admits that the action of the mercurial may be stimulating by its direct action on the hepatic cells, the increase of normal bile is by no means beyond dispute. He believes that the increase of bile in the passage from the bowels is simply the result of the irritation caused by the presence of the purgative mercurial in the duodenum and its reflex stimulation to the gall-bladder, with a consequent contraction of that viscus and an extrusion of the bile stored in it. He does not think that the stimulating power of the mercurial is above that of the resinous cathartics or Croton oil. Sidney Ringer rapidly presents the conclusion of the experimental physiologists, and in answer says: "Yet the experience of generations strongly supports the general conviction that in some diseases calomel as well as the other preparations of mercury, does increase the bile. Moreover, it is not difficult to conceive that in a given disease, mercury may set aside some condition hindering the formation of bile, and then act as a cholagogue, (hepatic stimulant), though possibly in health it might check the secretion." Harley, in the portion of his work on the liver devoted to the general treatment of disorders of this organ, has this to say: "The first remedy to which I shall your attention is the well-known, old-fashioned mercurial, which after having been in general use among all ranks and classes of society for generations, may still be looked upon as the physician's mainstay in the treatment of the majority of liver cases. Every housewife knows that a dose of calomel at bed-time, followed by black draught in the morning, will suffice in the majority of cases to cure an attack of biliousness, and that, too, within twenty-four hours after its administration. At the present moment, however, a change has come over the spirit of the physician's mercurial dream, and the poor old drug has been placed at the bar, like a suspected criminal on trial, on account of experimental physiologists having found that when administered to the canine species, it does not behave itself in what according to old-fashioned ideas might be called an orthodox manner." He denies that mercury in any form can increase the secretion of bile, no matter whether the dose be large or small, providing the liver is in a healthy condition; but he says the apparent increase is simply the emptying of the gall-bladder, caused by the reflected irritation of the duodenum. While admitting that there is sufficient evidence derivable from physiological sources to prove that mercury has no power to stimulate the normal liver to secrete bile, he firmly asserts the truth of the statement that in certain cases of diseased liver, where the biliary secretion is retarded and diminished, or even arrested in consequence of a congested condition of the tissues of the liver, mercury has a powerful effect in increasing this secretion and restoring it to an amount approaching the normal. His explanation of this power which is indirectly applied to the hepatic cells, is the antiphlogistic effect of the drug in question on the hepatic capillaries, such being the influence upon these vessels that a cessation of the congestion follows and relief from pressure allows the hepatic cells to assume their normal work. The fact that an increase follows the administration of the mercurial is admitted, the floundering of these speculators as to the mode of producing the result only remotely interests us until there shall be such a decided opinion justified as to deserve a general following. Legg says the action is through the nervous supply of the liver, after he has satisfactorily to himself explained away all other methods of accounting for the stimulating influence of the mercurials.

The practical pointed remarks of Fothergill seem to form an excellent conclusion to this essay. He has been discussing the abuses in the indiscriminate employment of mercury and deprecating these irrational methods of practice, at the same time he sees in the reaction a wide-spread and unwarranted skepticism as regards drugs for any purpose, " while an unbounded faith in beef tea and the sustaining plan of treatment now generally obtains" with the anti-mercurialists. " Nevertheless, in many cases a mercurial and a saline afterward form a very good plan of therapeutic attack in emergencies. Nor does this confession of faith in mercurials as a cholagogue involve a retrograde movement, which will extend to resuscitation of a belief in witchcraft or the tenets in Druidism. To advocate the proper use of mercury as a cholagogue is not the revival of an exploded superstition. Potent for good, still more potent for evil, when abused, mercury has fallen from its high estate into comparative disgrace and neglect. Its claims however must be considered rationally. Highly as it was once extolled, it is now equally abused and depreciated. The reaction actually extended to the point of abandoning mercury in the treatment of syphillis. Slowly the tide of indignation against the use of mercury has ebbed, until its use in syphilis is once more universal."

Still further on Fothergill says: " The late Prof. Hughes Bennett hated mercury with a virulence scarcely conceivable by those who did not know him. He denounced it, he inveighed against it, he poured all the power of ridicule he possessed, and that was no small amount, upon it; he shot every arrow of sarcasm in his quiver, and it was a pretty fully one, at the misguided, wicked persons who dared to advocate the administration of one grain of calomel. Peace to his ashes! an iconoclast, he did good service in his way. The crusade against mercury is now passing away, and its rational use is finding advocates everywhere. In speaking of the use of mercury in liver disturbances Dr. Budd wrote: 'The marked temporary benefit often resulting from mercury given for this effect has, from the difficulty of distinguishing the various diseases of the liver, and the consequent indiscriminate use of the drug, led to great evils.' The way in which German writers have condemned the English use of mercury has done much to help on the growing disuse of the drug; their condemnation has been wholesale, thorough-going and indiscriminating itself, and has been sometimes the blatant utterance of ignorance as well as at times genuine, honest criticism."

Dr. Murchison has put the position of mercury very pointedly. After giving the results of numerous experiments he proceeds: "Mercury and allied purgatives produce bilious stools by irritating the upper part of the bowel and sweeping on the bile before there is time for its reabsorption. It would appear that mercury, by increasing the elimination of bile and other products of disintegrated albumen circulating within the portal, is, after all, a true cholagogue, relieving a loaded liver far more effectually than if it acted by merely stimulating the liver to increased secretion as was formerly believed, and as some authorities yet maintain—for in this case it might be expected to increase instead of diminishing hepatic congestion" Here he differs entirely with Harley, but he goes further: "It is not impossible that the good effects of mercury on the liver and in some forms of inflammation may be due to its property of promoting disintegration. But in whatever way it is to be explained, the clinical proofs of efficacy of mercury in certain derangements of the liver are to my mind overwhelming. I say so more advisedly, because I was taught to regard mercury as a remedy worse than useless, not only in hepatic diseases but in syphilis; it cannot therefore be said that the convictions forced upon me are the results of preconceived opinion." And here Fothergill leaves Murchison with these remarks with which we shall dismiss the subject: "Dr. Murchison was a pupil of the late John Hughes Bennett. So was I; and I can also plead that my belief in mercury has been forced upon me by experience, for Bennett's thundering diatribes dominated my mind for a long time, and the impression made by him on my youthful mental forces was only ground out by the resistless action of accumulating experience."

MALARIAL HÆMATURIA.

By JULIAN M. BAKER, B. S., M. D., Tarborough, N. C.

[Pittman Prize Essay of the Medical Society of the State of North Carolina, for the year 1887.]

Since the close of the Civil War, our medical literature has abounded in reports of a disease considered of malarial origin, and having for its most prominent features jaundice, dark urine, nausea, great depression and remarkable fatality. Under various names, physicians of the South and Southwest have detailed its outward phenomena, but few however pursuing the investigation to the determination of pathological facts and the establishment of definite pathological relations. The disease was at first regarded as a new one; one that did not exist prior to 1866 or '67. An examination of the works of some of the classical medical authors reveals the fact that even in the time of Hippocrates certain urinary changes were noted in the "Ardent fevers," and that these changes correspond with those of Malarial Hæmaturia of our times; leaving little doubt that the disease did exist in the warm climate of Greece more than two thousand years ago. Galen gives an unfavorable prognosis in paroxysmal fever accompanied by thirst, black urine, dry tongue, delirium and coldness of the extremities. Cornelius Celsus recognized the appearance of blood in urine of fever patients as foreboding evil.* Livy mentions the occurrence of fifteen plagues at Rome up to B. C. 450, and contemporaneous writers attribute the origin of these plagues to effluvia from neighboring marshes. When the Pontine marshes were drained, Rome became more healthful. After the subjugation of the city, the aqueducts were cut, the drains filled, and the country was again afflicted with a malignant type of malarial fever. In the writings of Lancisius an accurate account is given of these epidemics, detailing many characteristics of the disease. Still later, in the writings of Lantter, Torti, Tissot, Senac, and many others, a disease is described characterized by suppression of urine, coma, convulsions, congestion of brain, lungs, liver, spleen and kidney, and hemorrhage from kidney and bowels, and in this is recognized the similarity to Malarial Hæmaturia as it exists with us, or so nearly resembling it, that little has been gained by progressive development. Senac, who was physician to Louis XV. with extensive and accurate observation on urine, in 1769, after referring to the red appearance, regards the settling to the bottom of vessels of a white matter as a favorable sign. Alibert, in 1807, in his treatise on malignant fevers, calls attention to the condition of urine, saying: "The diminution in quantity and the assuming a black color is an alarming symptom."† Various writers at different times have recorded

---

*Cels. De Medicine.
†"Treatise on Malignant Intermittents." J. I. Alibert.

the remarkable fatality of malignant fevers in Java, Guinea and hot climates, accompanied by hemorrhages, and according to Lind, this is the disease most to be dreaded by Europeans visiting the Tropics.* In the putrid remittent of writers of the first half of the present century, accompanied by nausea, vomiting dark matter containing bile, sometimes hemorrhages from eyes, nose, bowels or kidneys, yellow skin, black urine, and great mortality, clearly the essential character of Malarial Hæmaturia is exhibited.

More credit is probably due Professor Jones, of New Orleans, than anyone else for determining definite pathological facts and a scientific and exhaustive study of the disease. According to Jones, the first case published in this country was by C. Gidden Young, M. D., of Greenwood, La., in October, 1843, and reported as a case of Intermittent fever, with periodic hemorrhage from kidney.† R. H. Day, in a paper read before the Louisiana State Medical Society in April, 1886, combats the idea of recent development and affirms that he met with the disease in 1837, in the bottom lands of Wabash and White rivers in Indiana and Illinois. He maintains that "It is a miasmatic disease, caused by malaria, whatever that undefined and as yet undetermined fever poison may be. Its occurrence in the same localities in the same seasons of the year; its striking resemblance and strongly marked physiognomy to Malarious Bilious fevers, endemic in those sections, and its general amenability to the same therapeutic agents, reveals its kinship, stamps it as allied to, and of common origin and nature with them." Cases were reported to the Alabama State Medical Society in 1850, by Dr. T. H. Anderson. It was recognized in 1855 by Oxamendi and Nunez in the West Indies, always occurring in swampy and malarious districts, and when cured at all, cured by Sulph. Quinia.

Dr. James Copeland, in his Dictionary of Medicine, published in 1855, says: "Periodic Hæmaturia is not uncommon in malarious climates."

The first to carefully investigate the pathological lesions of the disease was Dr. Freid Theod Frerichs. He established the fact of its existence in Breslau in 1854. In his work on diseases of the liver, the pathological changes of Malarial Hæmaturia are recognized in the "Pigment liver," "Melanæmic liver," etc. His classification of malarious fevers with pigment liver, as observed at Breslau, was as follows:

I. Cases with predominant brain symptoms.

II. Cases in which the kidneys are prominently implicated.

III. Cases with predominant derangement of the gastro-intestinal tract, and of appertaining organs, but particularly the liver.

IV. Those forms in which local derangement is not conspicuous, but Anæmia and Hydræmia, resulting from derangement of spleen, con-

---

*"Diseases Incidental to Europeans in Hot Climates." Dr. James Lind.
†"N. O. Med. and Surg. Journal," Nov., 1845.

stitute most important symptoms. In these cases the pigment in the blood is of subordinate importance, inasmuch as its quantity and character do not give rise to extensive lesions of capillary circulation.*

The second class, "Cases with predominant affection of kidney," is of special historical interest. In that class of cases, "The urine was deep reddish brown, and coagulated upon boiling or addition of nitric acid, pulse was from 80 to 120, and much complaint of headache and great depression. Post-mortem showed the spleen large, soft and darkly speckled, liver normal size, surface smooth, margin sharp, its parenchyma loaded with greyish brown pigment, bile pale and copious, kidney lobulated and on section presented a homogeneous, brown, glistening surface. There were numerous pigment cells and scales in the glomeruli of malpighian tufts; bladder contained bloody urine."†

These observations agree substantially with those of Jones in 1857, and show that profound lesions of liver, spleen and blood precede and accompany malarial diseases.

From the observations of Frerichs and of Jones, we learn that the pathological changes of all forms of malarial fever are uniform, and consist essentially in "Diminution of colored blood corpuscles, deposit of pigment in liver and spleen and increased secretion of bile."‡

The composition and amount of urine was found to vary with stage, intensity and type of disease. Jaundice, bilious vomiting and dark brown or black urine was observed in the gravest cases.

From this brief historical allusion we are forced to conclude that Malarial Hæmaturia or Hæmorrhagic Malarial fever is not a new disease, but its recognition as a distinct type is modern. The sam, symptoms and signs were recognized more than two thousand years ago, but only since 1866 or '67 has it been given so dignified a place as a separate and distinct type in the classification of diseases. It was before that time considered a complication of other forms of fevere nevertheless, its essential characteristics were known to Greek, Roman and Arabian physicians. American authors, with few exceptions, even now fail to give it the place in their works which our experience consider it should have; this is owing to the fact, not that it is a new disease or a rare one, but that it exists only in a limited area of territory, and the medical men of that portion of the country are not generally book-makers, and when articles have appeared from physicians living in those sections in which it is prevalent, the effort was not to the determination of definite pathological relations, but more to outward symptoms and treatment.

Descriptions of the disease have appeared under various names in the periodical literature of the last twenty years, such as Recurrent

---

*"Clinical Treatise on Diseases of the Urine."

†Ibid.

‡"Med. and Surg. Memoirs." Joseph Jones, M. D.

Malaria Hemorrhagica, Epidemic Jaundice, Hemorrhagic Malarial fever, Icteroid Pernicious fever, Malarial Hæmaturia, Country Yellow fever, etc. The most appropriate name, it seems to me, is Endemic Hæmaturia, but I shall adopt the nomenclature now generally accepted.

There has occurred in this section a number of cases having the general characteristics of Malarial Hæmaturia as reported from other sections of the country, but with slight specific differences.

Instead of following the usual course and generalizing as to symptoms, course, duration, &c., I will select a few cases that have come under my charge recently, and which I consider typical of the disease in this section. The general deportment may be drawn from the following:

Case I.—Mrs. E., white, aged 32, mother of five or six children, a strong woman, residing about four miles from town in a section not specially malarious, (but intermittent and remittent fevers had occurred occasionally on same plantation during present fall,) in about one mile of Fishing Creek, on an elevated place. Patient had dark hair and eyes, and had led the life of an ordinary housewife of moderate means for years. Had had one attack, similar in all respects to present one, several years previous, from which recovery had been complete.

Was taken suddenly on September 15th, 1885, at 7 A. M., with severe rigor, which soon passed off, and was followed by reactionary fever. I was called on the following day about 9 A. M., when the above history was elicited. Patient was of a deep golden color, lips, conjunctiva and tongue pale and anæmic, with the same golden appearance. She was suffering with intense nausea and cephalalgia. There was anorexia, great uneasiness and anxiety of countenance, skin cool and clammy, tongue furred and dry. Pulse 134; Temp. 100⅕° F.; Resp. 28. Bowels constipated, urine scanty and of dark brown appearance; vomited matter of a deep yellow color, staining every article with which it came in contact; expectoration of same golden hue. She had passed the black urine and vomited yellow matter since the day previous, when first taken. It had continued without cessation up to time of visit. There was slight enlargement of liver and spleen, with tenderness over these organs, and upon firm pressure in lumbar region. Diagnosed Malarial Hæmaturia, and urine taken home for examination. The following was the result: Specific gravity, 1,014; color, dark reddish brown; reaction, acid; estimated quantity in previous twenty-four hours, 20 or 25 ozs.; albumen estimated 20 per cent.; no sugar, but an abundant dark brown deposit. Under the microscope, this deposit was found to contain the following: Crystals of uric acid, a few of urate of soda and amorphous phosphates; also coloring matter of blood and bile, with a few colored blood globules, swollen, distorted, broken or shriveled, and pus corpuscles. Blood and epithelial casts of straight and convoluted tubules and an abundance of kidney epithelium, with some from bladder, vagina and mucosa of uterus. An acute croupous, hæmorrhagic nephritis, with slight cystitis, vaginitis, and inflammation of endometrium. The two latter probably having existed prior to present attack.

September 27th, 9 A. M. Passed a very restless night, delirious and semi-comatose; when aroused expresses great anxiety and seems to realize the gravity of the disease. Pulse 130; Temp. $99\frac{4}{3}$° F.; Resp. 30. Grave symptoms of previous day continue; urine still dark; stomach little more quiet; marked cerebro-spinal disturbance. Estimated quantity of urine in past twenty-four hours, 22 ozs; specific gravity, 1,014; same morphological characteristics as day previous. Bowels moved freely from cathartic administered previous visit. Treatment then inaugurated, and which is detailed later on, was continued.

September 27th, 9 P. M. Pulse 123; Temp. $99\frac{4}{5}$° F.; Resp. 24. No perceptible change, except takes nourishment more freely and stomach more retentive of both food and medicine. Coma seems to be deepening.

September 28th, 9 A. M. Temp. 98° F.; Pulse 140; Resp. 30. Attendants say had one or more convulsions during night, and had passed no urine since previous visit, catheter removed about two ounces of urine, similar in all respects to that previously voided; specific gravity of this 1012; coma profound; skin cool and clammy, and every indication of approaching dissolution. About 2 o'clock P. M. there seemed to be an effort to rally; four or five ounces of nearly clear urine was passed; specific gravity 1010, but differed from that previously passed only in containing less biliary and blood coloring matter. In a few minutes she again fell into the profound coma, with frequent convulsions, and died about 6.20 P. M. Cause of death in this case was undoubtedly uræmic poison from suppression of functional activity of kidney by the structural lesions of acute croupous nephritis.

CASE II.—Mrs. B. E., a sister-in-law of Case I, living in same section, one quarter of a mile distant, 33 years old, blonde, widow, four children. Had lived at present abode seven or eight years, and had had a previous attack before moving here, while residing in another part of the country. Had had chills and fever for a week prior to present attack, for which large quantities of sulph. quinia had been administered. Was called in on August 4, 1886, 12 M. Present attack had come on gradually, symptoms increasing in severity from day to day, until at the time of my first visit I found marked jaundice, skin of a golden yellow color, lips, tongue and conjunctiva all colored, intense pain in lumbar region, urine scanty, of characteristic dark brown color, staining sides of vessels yellow when tilted from side to side, bowels constipated, nausea, and vomiting characteristic bilious matter, tenderness over epigastrium and hypogastrium not marked but some slight enlargement of liver and spleen, no cerebro-spinal disturbance, mind perfectly clear and composed. Pulse 118; Temp. 102° F.; Resp. 24. Examination of urine—specific gravity 1016; contained salts of urea, some simple and triple phosphates, albumen, hyaline, epithelial and blood casts of tubuli uriniferi, epithelia from kidney tubules, coloring matter of blood and bile, disintegrated blood corpuscles, but some few intact, and pus, indicating acute croupous hemorrhagic nephritis with a constitution much impaired, but not to the same extent as in Case I. Estimated quantity of urine in twenty-four hours 30 ozs.

August 13th, 9 A. M. Stomach more quiet, retains both food and medicine generally. Pulse 114; Temp. 98½; Resp. 24. Slept two or three hours during previous night. Bowels moved copiously by cathartic; jaundice not so marked; urine slightly clearer; specific gravity 1016; estimated quantity in twenty-four hours, 18 or 20 ozs; still contains albumen, casts of tubuli uriniferi, coloring matter of bile and biliary acids and blood, in fact, same as day previous, except in diminished quantity.

August 14th, 9 A. M. Patient much improved, jaundice almost entirely gone, urine considerably clearer, although still contains albumen, coloring matter of bile and blood and casts; specific gravity 1016. Patient passed a very good night, takes food and nourishment sufficient, bowels kept open by cathartics, tenderness over epigastric and hypogastric regions has entirely disappeared. Pulse 95; Temp. 99° F.; Resp. 20.

August 15th. Improvement continues; still very much prostrated, so much so as to be unable to turn in bed without assistance; jaundice disappeared; urine nearly clear. Pulse 95; Temp. 99⅕; Resp. 20.

August 16th. Improvement continues; urine clear; contains no albumen or casts; an abundance of salts of urea; no coloring matter of bile or blood; specific gravity 1017; bowels still constipated and moved only by cathartics. From this time on, under a general tonic treatment, in two or three weeks patient was entirely restored to health.

It is common to have cases progress favorably, as this one did up to the 17th, and when we begin to congratulate ourselves on the favorable issue, to be suddenly summoned to the bedside to find either that death has already taken place, or does in a few minutes after our arrival.

The urine not becoming dark again, or other indications of fresh malarial absorption, death in these cases is due to cardiac thrombosis, which is the result of the hyperfibrinated condition of blood due to malarial poison.

In Case II, on August 20th, urine again became dark, with a return of nausea, but on being voided a few hours after it was again clear, and there was no interference whatever with the steady progress toward recovery.

CASE III.—Arthur E., nephew of preceding cases, residing in same locality, about one mile distant, blonde, aged 15, has resided at present abode all his life. Had an attack previously, while on a visit in an adjoining county, several years ago, from which he recovered, and since then has suffered almost continually with headache; otherwise healthy and strong. Had a few chills immediately prior to present attack. Was called early on the morning of November 11th, 1886; found skin golden yellow, lips, tongue and conjunctiva same; nausea intense; restless, anxious, great prostration; jaundice ushered in night previous by a severe rigor, which lasted an hour or more, when urine became cloudy and scanty; at the time of visit it was almost black. Was unable to retain anything on stomach, vomited matter that stained everything yellow, and at times, black; pain and tenderness in lumbar, epigastric and hypogastric regions; there was slight enlargement of liver and spleen; no disturbance of cerebro-spinal centers; tongue dry and covered with a dark fur. Pulse 130; Temp. 100° F.; Resp. 22. Examination of urine showed specific gravity 1017, albumen, casts and epithelia of the tubuli uriniferi, crystals of urate of soda, uric acid and a few amorphous phosphates, all stained with coloring matter of bile and blood, no blood corpuscles, but a few pus corpuscles; estimated quantity in twenty-four hours, 36 ozs. Bowels constipated and cephalalgia intense. Numerous bacteria were observed in urine although examined a very short while after being voided. Vomited matter contained biliary acids, biliverdin and cholesterin, epithelia from mucosa of stomach and bile ducts and disintegrated blood corpuscles.

November 12th, 9 A. M. Pulse 130; Temp. 97° F.; Resp. 20. Passed a restless night; urine still black; vomiting continues; icteric hue not so deep; takes no nourishment by mouth; bowels moved freely during night by cathartics; composition of urine same as previous day; passed larger quantity, estimated at 38 ozs. in twenty-four hours; specific gravity 1017.

9 P. M. Skin decidedly clearer; urine passed more copiously, but still dark colored; nausea ceased almost entirely; able to retain both food and medicine; urine not examined. Pulse 112; Temp. 98⅘° F.; Resp. 21.

November 13th. Somewhat better; skin decidedly clearer; no return of nausea; urine still dark colored; passed about 40 ozs. in last twenty-four hours; still contains albumen, casts, etc. Pulse 114; Temp. 98° F.; Resp. 19.

November 14th. Improvement continues; urine slowly clearing up; regaining strength very slowly; skin perfectly clear; passed a tolerably quiet night; bowels moved by cathartics. Pulse 112; Temp. 98½° F.; Resp. 19.

November 20th. Improvement has been gradual since last report;

urine gradually becoming clearer until it is perfectly so, and contains albumen or casts or coloring matter of bile or blood; no return of nausea. Pulse 102; Temp. 97° F.; Resp. 19. Still unable to move without help.

November 21st. Urine again became cloudy, but no other indication of a relapse. It contained no albumen.

November 22d. Urine has again become clear; gained some strength; takes food with a little less reluctance. From this time on the case has progressed satisfactorily, without an untoward symptom, the only feature worthy of note being the slowness with which strength was regained, it being fully two months before the patient was able to walk, although requiring no attention other than a general tonic treatment.

A fourth case is reported, not because of any special clinical difference from the preceding ones, but because in it a post-mortem examination was made, and on the result of that the ideas as to pathology subsequently expressed are in the main founded.

CASE IV.—Rufus W., a negro man, 40 years old, strong, robust, athletic, a farm laborer, residing about four miles from town, near low grounds of Tar river. Was taken suddenly while at work in the field, picking cotton, on October 13th, 1886. Had a chill in the afternoon and returned to the house. At night, in a semi-conscious condition, he undertook to go out the door to void urine; in the effort it was noticed by his companions that a quantity of bloody urine was passed along the floor, from bed to door; immediately a physician was sent for; upon arrival patient was found delirious, with great prostration. Pulse rapid and feeble, 120; Temp. 100⅕° F.; Resp. 22.

The black skin did not show the icteric hue, but conjunctiva, lips and tongue were of characteristic color; urine scanty and dark reddish brown, and passed unsconsciously in bed; contained some morphological elements as in preceding case; agonizing nausea and obstinate constipation.

October 14th. Considerably wòrse; pulse so weak and quick as to be scarcely able to count; Temp. 97° F.; Resp. 33. Urine passed unconsciously and of same character as before; nausea continues; greater prostration; skin cool and clammy.

October 15th, 9 A. M. Prostration still greater; died about 2 o'clock P. M., being about forty-eight hours from time first taken. Post-mortem four hours after death; result is given further on.

Before giving the results of my own study as to the nature and pathology of the disease, let us briefly review the prevailing idea in regard thereto, then compare with my own and see wherein they differ and wherein the observations of others are corroborated.

The principal pathological lesion is in the liver, spleen and kidney, only such changes being found in other organs as would naturally occur from a radical derangement of these three. According to Prof. Jones,* these organs exhibit the same changes as are found in other forms of malarial disease. His post-mortem examinations reveal that the liver is enlarged, slate-colored exterior and deep bronze interior. Microscope revealed a number of dark, brownish red and black pigmentary particles, similar to those in other forms of malarial fever. In other cases the liver was a Spanish-brown color, and not of the deep slate exterior and bronze interior, characteristic of malaria. The pigment particles in these cases were present, but in less quantity, sometimes, also, oil globules in larger quantity than in a normal malarial liver. In the former class there was no deposit of yellow granular matter, the dark pigmentary deposits were most abundant in portal capillaries of hepatic lobuli; liver cells pale.

Spleen presented a purplish appearance and all the characteristics of a malarial spleen. In other cases the spleen contained fewer pigment particles than is found in bilious remittent fever.

The kidneys presented slate-colored spots on exterior and were greatly congested. Upon section, blood vessels to smallest capillaries were filled with coagulated blood, also altered blood globules and granular matter deeply colored with hæmatin; texture softer than normal. Many of the capsules of the Malpighian bodies filled with coagulated blood, blood corpuscles and deep red fibrous matter.

Pigmentation takes place in kidney also, but in some cases to a very limited extent.

The same authority finds the serum of the blood of golden yellow color, containing coloring matter of bile and biliary acids. The deep golden color of serum is caused by bile pigment and imparts the golden hue to skin and conjunctiva. Coagulum firm; separation between clots and serum perfect; clots floated in the golden colored serum. Under a magnifying power of 420 there was seen numerous dark granular masses, dark spherical bodies resembling spores and pigment cells from two to four times the size of white blood globules. Many of the colorless corpuscles contained numerous pigment particles.

1000 parts of blood contained:

Water	820.50
Dried blood corpuscles	86.47
Fibrin	4.50
Saline matter	7.18

Extractive matter of serum contains urea, coloring matter and biliary acids in larger quantity than normal blood. The relative number of red blood globules is diminished and liquor sanguinis increased. The quantity of fibrin is increased, indicating an inflammatory condition of this fluid as well as the kidney.

---

*"Medical and Surgical Memoirs."

Urine contains in variable quantity urea, uric acid, phosphoric acid, sulphuric acid, chloride of sodium, and albumen, coloring matter of bile and of the blood, and biliary acids. Microscopically examined it was found to contain cast of tubuli uriniferi, stained orange yellow and reddish brown from coloring matter of bile and blood, masses of altered hematin, blood corpuscles variously altered in shape, and sometimes yellow granular matter.

My own observations have, besides the clinical features, included chemical and microscopical examinations of urine and vomited matter, post-mortem examination and microscopic examination of liver, spleen and kidney. They were made upon eight or ten cases, coinciding in every material particular with the typical cases detailed above. In some respects my investigation leads to results different from those farther South, but it will be seen in most essential characters they are the same.

Whether this difference in results is due to an actual difference in the disease in the two localities or whether the difference arises from my imperfections, I cannot say.

In all cases in which accurate records were kept and investigation carried out, the same pathological changes were noted, the only variation being as a rule in degree. I have met with no case in which there was hemorrhage from other parts than the kidney, except in a few cases where there was slight hemorrhage into cavity of stomach as evidenced by presence of blood in vomited matter. This was inconsiderable and did not attract much attention.

The vomited matter contained biliary acids, cholesterin, biliverdin, epithelia from mucosa of stomach and bile ducts, sometimes altered blood and a peculiar form of micro-organism, which will be more fully spoken of hereafter. Urine invariably contained epithelial and blood casts of straight and convoluted tubules, coloring matter of bile and blood, and epithelia from tubuli uriniferi, all colored yellow or brown. Sometimes, though rarely, there were a few red blood corpuscles; generally they were broken down and disintegrated, characteristic of the depressed vital state. It contains also salts ot urea in variable quantities, uric acid, sometimes simple and triple pnosphates, was generally acid, and specific gravity varied from 1012 to 1016.

Various forms of bacteria are seen in urine in an incredibly short time after it is passed. I have always found them when examined as soon as could convey urine to office for examination. I cannot say urine contains the bacteria when passed, for my examinations were never made under an hour after it was voided; at any rate, if not present when voided, and if these bacteria result from fermentative changes or decomposition, then these changes take place in urine in a very few minutes after passing from the body. Post-mortem examination of Case IV, which corresponded in every essential clinical feature with other cases, was as follows:

Conjunctiva, lips, tongue and palm of hands deep golden yellow color; not much emaciated; well developed muscular system.

Thorax: lungs pale and anæmic, otherwise normal in all respects. Right ventricle distended with coagulum, otherwise appearance of heart was healthy. Abdomen: adipose tissue of abdominal walls colored deep yellow by coloring matter of bile; tissue softer and muscles redder than usual. Stomach contained a quantity of dark green matter; mucous membrane markedly injected, more noticeably near cardiac orifice; bilious matter mixed with a quantity of glairy, tenacious mucus. Liver slightly enlarged; upper and outer surface normal in appearance. When raised from its bed the whole under surface was a dark bronzed appearance, this bronzing breaking off abruptly at the inferior margin.

Upon section the lobules were pale and portal vessels brownish. Under microscope the epithelia of alveoli was seen to hold a dark brown, granular mass, some epithelia coarsely granular, nuclei concealed. Fat globules were noticed to a limited extent, but exact increment of oil not estimated; capillaries empty, but terminal portal vessels filled with altered blood. Throughout the structure the same peculiar-shaped micro-organism, noted in vomited matter previously, was seen. Gall-bladder distended with a quantity of dark green bile. Spleen somewhat enlarged, containing same dark brown, granular mass in splenic pulp, and also same form of bacteria noted in liver.

Kidney greatly congested, with dark bronzed, irregular shaped spots on exterior; under microscope tubuli uriniferi distended with epithelia; in some cases with blood casts or same granular mass seen in liver; Malpighian tufts enlarged, congested and in some places ruptured.

Specimens of liver and kidney were sent to Dr. C. Heitzman, New York, for a more complete microscopic examination. The following is from Dr. H.'s letter:

"Liver—portal vessels replete with blood, but no blood corpuscles are recognizable. In their stead there is a granular or lumpy dark brown mass so characteristic of dissolution of blood; capillaries of lobules are mostly empty; liver epithelia generally unchanged, finely granular and nucleated; near the border of the aveoli the epithelia are coarsely granular, their nuclei being concealed, and such epithelia hold a dark brown mass, coloring matter of the blood. Some epithelia also hold droplets of fat, but not in excess and not enough to call the liver markedly fatty.

"Both the intestinal connective tissue and capillaries hold peculiar wadlets of microbe, very similar to those of splenic fever in cattle, only a little more slender. In some places I have seen bunches of such bacilli arranged in shapes of leptothrix.

"Kidney—tufts slightly enlarged, the nuclei of their capillaries considerably augmented. Interstitial connective tissue crowded with inflammatory corpuscles in the stage of granular protoplasm; convoluted and narrow tubules are either choked with a proliferating epithelium yielding a number of inflammatory corpuscles, or they contain plugs of the dark brown granular mass seen in portal vessels and blood casts. Many tubules have lost their epithelia to a narrow rim around the basement membrane, others contain detached epithelia and pus corpuscles.

"The kidney is in an acute croupous, hemorrhagic inflammation. The blood disorganized as is usual in septic æmia." He goes on to say: "There is no reasonable doubt in my mind that the disease is primary neither in liver nor kidney, but is an infectious disease, caused by some microbe, nearly identical with that of splenic fever in cattle, that kills human beings also in a very rapid manner."

It will be seen from this that Malarial Hæmaturia has a definite and settled pathology and that it is characterized by profound lesions of the kidney and the alteration and destruction of red blood globules. Jones has shown that this destruction takes place in the liver and spleen. The fact of a peculiar microbe appearing in these organs raises the question of the influence of the micro-organism upon such destruction and to the subsequent kidney lesions.

Without denying the fact, as maintained by others, that the pathological changes in kidney are brought about by the action of biliary acids in blood, and their selective irritant action on kidney or by this destruction of blood corpuscles and consequent pigmentation of various organs, our investigation forces the conclusion that some causative relation should be ascribed the rod-like microbe seen in liver and spleen. That this destruction of red blood globues does take place has been abundantly proven both by chemical analysis and by actual counting with micrometer and by appearance of coloring matter in urine. The deposit of pigment is derived from this destruction, the hæmo globulin being decomposed, the hæmatin set free, these pigment particles are transferred through the circulation and deposited in various organs, producing a train of symptoms peculiar to the organ affected. The facts point then to the existence of a specific poison in Malarial Hæmaturia. The exact nature of this poison, whether only a malarial element exists or not, will require future investigation to decide. It has been and is now considered only as one of the manifold exhibitions of malaria. Malaria is an indefinite term to express an undetermined entity behind which our professional shortcomings and inaccuracy of ideas has taken umbrage for generations.

That the malarial poison is a living germ has been a prevalent theory in medicine since the time of Lucretius, but the isolation and determination of the real nature of the germ is not yet accomplished, notwithstanding the investigations in recent years of such learned and distinguished microscopists as Mitchell and Saulisbury of our own country, of Belestra and Langi in Italy, Ecland in Sweden, and Klebs and Tomassi-Crudeli in Rome. While the results obtained by these observers differ as to the peculiar form of micro-organism which produce malaria, they strengthen the theory that such an organism does exist, and confirm the belief that future observers will discover the true bacillus malariæ as has been done in typhoid fever. phthisis and many other diseases. The results obtained by Klebs and Tomassi-Crudeli deserve most attention and may eventually prove a satisfactory solution of the difficulty. Their observations have been verified by Marchiafava and Cuboni, by Langi and Berito; all these observers claiming to have observed the identical spores and bacilli in blood of malarious fever as those seen by Klebs and Crudeli. Lavaran finds parasitic elements that exist only in malarious fevers and they disappear under administration of sulphate of quinia. They are the same as pigmented bodies known as melantic leucocytes. "It is a curved or cylindrical body, transparent with a pigment spot, sometimes motionless and sometimes active. The ultimate stage of development is a motionless spherical or irregular shaped body containing dark red, rounded, pigment grains." Much more might be written concerning the prevailing opinions in regard to the nature of malarial poison, but it would take us beyond the limits of this paper; suffice it to say, that the germ is almost in the bounds of the visible, and that it is a living pathogenic organism is certain. There are certain well known outward manifestations of its habitat within the system and which characterize the diseases of which it is the cause.

The primary pathological lesion when the malarial poison enters the system is in the blood itself, destruction of red globules, loss of saline constituents, the increase of coloring matter of serum and retention of coloring matter of bile. With an altered blood, primary functional disturbance will be produced in various organs, dependent on this alteration in supply of nutritive fluid; in fact, there will be marked perversion of physical, muscular and nervous force; secondarily, there are structural alterations in various organs. Without going into details, we will say that these structural changes do not differ materially from changes wrought by other morbid processes, but the distinguishing characteristic, that which gives malarial diseases a definite pathology, is the pigmentation and destruction of red blood globules, this being the result of the ravages of the malarial micro-organism. The outward manifestation of the existence of malarial poison in the system is, "Prevalence in certain sections at certain seasons, periodicity and regular succession of cold, hot and sweating stages."

With this digression, which was necessary to fully explain views expressed further on in regard to Malarial Hæmaturia, let us return to the consideration of this disease. The disease, in its various forms, as met with in this locality, is accurately portrayed in the four typical cases recorded in preceding pages. The clinical features of nearly all these cases were similar, and it is evident they were cases of Malarial Hæmaturia. It is a reasonable assumption that the pathological changes were the same and corresponded in every respect with Case IV, in which a post-mortem examination was held and accurate observations of histological characters made. Granting the propriety of this assumption, we are prepared to discuss the course of Malarial Hæmaturia as derived from observations on these four cases, or not granting it, we take only one and base our opinions on that, mindful of the fact that a single investigation does not prove absolutely anything in scientific research, but it must be some evidence, however little, to be used in the induction system of reasoning by which scientific accuracy is attained.

From what has preceded in regard to the general character of malarial diseases and special characteristics of Malarial Hæmaturia, we are forced to one of the following conclusions as to primary cause, viz :

I. Malarial Hæmaturia is is not of malarial origin.

II. If of malarial origin, there exists in addition to malarial micro-organisms another of very different character and with different outward manifestation of its existence ; or

III. Malarial Hæmaturia is of malarial origin alone, and micro-organism seen in Case IV was the bacillus malariæ of Klebs, Crudeli, Marchiafava and others.

Little doubt can be entertained from investigations that have preceded, that conclusion I is erroneous, unless it is assumed that the baccillus observed in Case IV is primarily and solely the causative element of the disease, and by its life acts all the ravages of the disease are produced. While this may be so, we are not prepared to prove it. That conclusion II is true is decidedly more probable, that is, that besides the general pathological characteristics of malaria, the disease presents others not seen in normal malarial diseases, and if malaria exists at all as a causative element, there is another of entirely different nature. There is a decided preponderance of evidence in all preceding investigations in favor of malarlal origin. Its mode of onset, its occurrence in certain localities at certain seasons generally, and the results of study of pathological changes all point to the fact that malaria exerts some causative influence. My own investigation discloses some discrepancies in the deportment of Malarial Hæmaturia and what may be called normal malarial diseases. These discrepancies, as noted in cases occurring in this locality, are principally in lack of periodicity and that clock-like regularity in the rise and fall of temperature, and the season of the year in which it occurs, and the appearance of a peculiar microbe not seen in malarial diseases. Cases are met with in all seasons, more often in the Fall, but in Summer and Winter as well, and in localities in which other malarial diseases are not prevalent to a great extent. When the disease once commences, as evidenced by jaundice, great depression, black urine and nausea, there is a continuance of these symptoms until convalescence or death ; no intermission or remission and return at stated intervals. After convalescence in exceptional cases, death occurs suddenly, without return of characteristic rigors. Either death results or convalescence commences in from two to ten days. In all my cases, a notable feature was low temperature and rapid, feeble pulse ; in cases of other physicians in this section I have heard of the temperature reaching 105° F. on first or second day, but after that there was the low temperature as in my cases. In no case has the temperature ranged higher than 102° F., aud this was following reaction from the first chill. The low temperature is a symptom almost pathognomonic, and should be looked for as much so as dark urine and jaundice. There is never, in cases here, a regular or periodic variation in temperature. The alkaloids of cinchona fail to exert the slightest influence over the disease in a great many cases, even when given early and by mouth, rectum, endermically and hypodermically. From this it will be seen that discrepancies do exist, and these discrepancies being a constant accompaniment of Malarial Hæmaturia in this section, there must be a constant and common cause of different nature and different attributes to the malarial poison, at the same time we recognize in pathological changes and in some clinical features the characteristics of malaria. We are then forced to admit two elements of causation, viz: The malarial bacillus and another different from any yet found in malarial diseases, and to strongly suspect a characteristic micro-organism of the diserse. It is reasonable to ascribe the variations in the conduct of ordinary malarial diseases and Malarial Hæmaturia to the presence of this bacilus so like the Anthrax bacillus. It cannot be that its greater severity is due to a larger amount of poison taken into the system, for upon post-mortem examination in many cases, the characteristics of malaria are not so conspicuous as it is in mild forms of malarial fever, when death occurs from some intercurrent malady, the malarial infection itself not being sufficient to cause death.

The bacillus observed in liver and spleen differs in essential parts from that described by Lavaran or Klebs and Crudeli, and destroys at once the idea that it is the bacillus malariæ. That such a combination of causative agents exist as we maintain does in Malarial Hæmaturia, is further substantiated by the fact that in many hot climates, as Egypt, Mauritus and Cape of Good Hope. a disease is met with, having many of the characteristics of the one in question, in which is found a microbe, the bilharzia hæmatoba. The presence of this microbe is always accompanied by dark urine containing altered blood, or a decided hemorrhage from the kidney. In malarial diseases in these countries, without the bilharzia, the kidney affection is not exhibited. It may be that the microbe observed in my case serves the same purpose here that the bilharzia does in those climates; the effect on the system is similar in many particulars. When the bacillus anthracis, to which the one observed in Malarial Hæmaturia seem so nearly allied, finds a habitat in the system, it produces many of the same symptoms as noted in the latter disease, such as vomiting, constipation, rigors, headache, extreme prostration, and usually speedy collapse. Temperature is usually very little elevaed, if at all; death occurs in forty-eight to sixty hours generally; it may be more rapid or delayed five or six days; no periodicity marks the disease. The only points of outward difference are the black urine and jaundice in Malarial Hæmaturia. It is reasonable to assume a certain relationship between the microbe of Malarial Hæmaturia and Anthrax, but they are not identical, and the deviations of the former from normal malarial diseases can be ascribed to the presence of this microbe, its effect being very much the same as the bilharzia in hot climates, although it differs from the bilharzia in outward appearance, as much as it does from malarial micro-organism as described by Lavaran and others. Future investigations, we think, will justify the conclusion that this bacillus is an essential element of causation of Malarial Hæmaturia, and that without its presence malarial diseases will exhibit the ordinary phenomena of Intermittents or Remittents, but with it, those of Malarial Hæmaturia. Our investigations prove this, but they are not sufficient to consider it an established scientific fact; all that we can hope to be accomplished by it is the direction of the attention of others to the results obtained, that the investigation may be further prosecuted.

As to treatment, I have very little that is new or original to offer, yet a few practical hints may be obtained from my experience. Our efforts should be directed to sustaining the rapidly failing vital force, and counteracting the effect of the poison, by cinchona alkaloids, the prevention, if possible, of suppression of urine, and the elimination of poison already in the blood.

In the beginning a brisk cathartic, either vegetable or mineral, should be administered; one preferable to any other is a combination of podophyllin, aloin and extract of belladonna, or calomel may be given alone or in combination with rhubarb. Great difficulty will be met with here in producing free catharsis on account of the irritable stomach and the rejection of all remedies administered for the purpose. If you can do no better, give enema containing castor oil and warm water. At the same time that efiorts are directed toward moving the bowels, quinia in some form should be administered, and as the excessive irritability of the stomach will prevent its administration by that way, it will not do to attempt it, but commence at once with other means; above all other methods, the hypodermic is to be preferred, and a solution of bi-sulphate or hydrobromate of quinia used by this method. It is a useless waste of time to wait and see if the stomach will not get quiet; commence at once the use of the hypodermic method, and to the aqueous solution of bi-sulphate it is advantageous to add a few minims of pure carbolic acid. Five grains of bi-sulphate should be thus given every three or four hours, until twenty-five or thirty grains are administered. If improvement takes place this is gradually diminished; if not, it should be continued. When it is not practicable to use the hypodermic method, quinia may be administered by rectum in suppositories or solution, or may be used by inunction; but no method is so reliable as the hypodermic. Careful alimentation is necessary but almost impossible on account of irritability of the stomach; here, too, hypodermics of beef, milk, cod-liver oil, etc., may be used to advantage. and likewise rectal alimentation practiced according to orthodox methods. To relieve the irritable stomach and introduce food and medicine by the natural channel would be a great advantage gained; sometimes this can be accomplished, but oftener it cannot. While not relying on the stomach, efforts should be directed toward relieving the agonizing nausea by application of sinapisms over epigastrium and internal administration of oxalate of cerium and bismuth sub-nitrate, and such other remedies as are generally used for such purposes; the remedy above all others to be relied upon to relieve the nausea is a solution of hydro-chlorate of cocaine; this sometimes acts like a charm, relieving at once the troublesome symptom, but like all other remedies, it sometimes fails; it should always be tried. It is well, however, even if the stomach does become retentive, to continue the administration of quinia hypodermically and burden the organ only with the necessary nourishment or stimulant; the latter it is necessary to use in all cases and use freely, but with judgment; iced champagne, milk punch and egg-nog are preferable. When it is possible to administer medicine by mouth digitalis infusion in one to two tablespoonsful dose is indicated for the double purpose of sustaining the weak heart and for its diuretic effect. It may be combided with aromatic spirits of ammonia or alkaline diuretics. The lumbar region should be rubbed repeatedly with spirits turpentine and every effort made to overcome the tendency on the part of the kidneys to strike work. No remedy is equal to twenty or thirty grains of calomel for this purpose. Morphia and atropia in combination should be administered as occasion requires to procure sleep and relieve pain, and the tendency to constipation overcome by continued administration of cathartics As soon as the urine clears up and convalescence is ushered in, a general tonic treatment should commence, continuing the administration of quinia in tonic doses for several weeks. After this such remedies are indicated as is usual in recovery from acute diseases and which it unnecessary to mention. I must call special attention to the use of cocaine in this disease. I have often seen it have the happiest effect in relieving nausea, stimulating the kidneys to increased activity and causing an increase in force of the heart's action. It has frequently happened that improvement commenced from the first dose of cocaine. It should be given in solution, using ten or fifteen minims of 4 per cent. solution, repeating every few hours until the desired effect is obtained.

AUTHORITIES REFERRED TO, AND TO WHOM SPECIAL REFERENCE WAS NOT MADE AT THE TIME.

"Medical and Surgical Memoirs" Jos. Jones, M. D. New Orleans, 1866.

"Reference Hand-Book of Medical Science." Vol. I. 1886.

Quain's "Dictionary of Medicine."

"Encyclopedia Brittanica."

"Microscopical Morphology of the Animal Tissus in Health and Disease." Charles Heitzman, M. D. New York. 1884.

"The Continued Fevers." J. C. Wilson, M. D. 1884.

"Practice of Medicine." Roberts Bartholow, M. D.

"Practice of Medicine." Austin Flint, M. D. New York. 1886.

"A Treatise on Albuminuria." W. Howship Dickinson, M. D. Cantab. New York. 1881.

"A Text-Book of Pathological Anatomy." Ernst Ziegler. Translated by Donald McAllister, M. A., M. B. New York. 1885.

Articles by Drs. W. A. Cochran, R. T. Abernathy, W. A. B. Norcom, T. G. Howard, B. Robinson, A. G. Mabrey and others.

SELECTED PAPERS.

THE ASSOCIATION OF AMERICAN PHYSICIANS.

Second Annual Meeting, held at Washington, June 2d and 3d, 1887.

Dr. H. C. Wood, of Philadelphia, opened a discussion on

THE ANTIPYRETIC TREATMENT OF FEVER.

In order to make the matter as brief as possible, he had prepared certain propositions which he would state, and then give what he thought to be the proof of their correctness. The *first* proposition was, "Fever is a disturbance of calorification in which, through the influence of the nervous system, heat dissipation and heat production are both affected. If there be a fever which is produced by the direct action of a poison, independently of the nervous system, we have at present no proof of its existence."

If an animal's temperature rises there must be a certain number of heat units used in producing that rise. If the temperature falls, there must be a corresponding lessened production of heat. In his experiments the agent used to produce the fever has been the pyogenic principle found in ordinary commercial pepsin. After the substance has been introduced the animal is put into a calorimeter. The animals used in the experiments have been dogs. In the normal animal heat production and heat dissipation are correlated functions. When the poison is injected it is found that heat dissipation increases at the time that heat production is diminishing, so that the fall of temperature was in part the result of heat dissipation and in part the result of diminished heat production. It is impossible that there should be this wide disturbance of these two functions simultaneously, unless the poison which produces the fever acted upon some one central organ, and that must be the nervous system. McCallister, of London, while believing that fever is often produced through the nervous system, thinks that at times it may be produced by widespread tissue change caused directly by the poison, his reasoning being that in the advanced stage of fever the temperature is higher than at the beginning. He says that the time when the poison is at its maximum does not correspond to the time when the fever is at its maximum. The objection to this argument is that we do not know that the poison of the disease is the direct cause of the fever. The poison which causes the disease in scarlet fever, etc , is probably not the poison which causes the fever. The latter is probably generated in the system.

Second. "Heat production is regulated by a nervous apparatus, our knowledge of which is imperfect. There is certainly an inhibitory centre which depresses or controls the production of heat. It probably does this by acting upon the trophic cells of the gray matter of the spinal cord. It is possible, also, that there is a centre which, when excited, increases tissue change, but its existence has not yet been proven." The speaker then gave a resumé of the experiments which he had performed, which, in his opinion, proved the truth of the above proposition.

Third. "Heat dissipation is regulated through the vasomotor system, so that vasomotor paralysis is followed by an enormous loss of animal heat, and under unfavorable circumstances by death from cold." If section of the cord is made in such a way as to get vaso-motor paralysis without destruction of the respiratory centres, the heat dissipation rises enormously. If the animal is kept in a temperature of 50° or 60°, it dies in a few hours of progressive loss of heat. If kept in a warm chamber, it lives for days. The cause of the rapid heat dissipation is the opening of the blood-vessels of the surface of the body.

When these remarks are applied to a study of antipyretics, it is seen that drugs may lower bodily temperature in health or in fever by increasing heat dissipation. In this way act all agencies which cause vasomotor paralysis. Antipyretics acting in this way may be called false antipyretics. Then it is conceivable that there may be drugs which act on heat production through the inhibitory nerve apparatus, of which mention has been made. Such drugs may for convenience be called true antipyretics. Aconite, veratrum viride and drugs of that class belong to the false antipyretics. Whether or not there are any true antipyretics has until recently been a question which we have been unable to answer. With regard to antipyrin, certain experiments made in the University of Pennsylvania seem to give some positive results. Care must be exercised in these experiments not to confound a normal defervescence with the action of the drug administered. In the dog the use of antipyrin diminishes both heat production and heat dissipation, the former being diminished more than the latter. It is probable that heat production is primarily affected. The question arises whether this result be due to an effect on the circulation. He has found that antipyrin has no effect upon the circulation. The blood-pressure was uninfluenced by its administration. He therefore concluded that the action of antipyrin upon the bodily heat was entirely independent of any action upon the circulation, and the probabilities are, of course, that it acts through the nervous system. Beyond this our present knowledge does not extend.

Dr. Francis Minot, of Boston, then presented some remarks on

THE TREATMENT OF TYPHOID FEVER BY ANTIPYRIN AND THALLIN,

based on the observation of twenty-four cases treated in the Massachusetts General Hospital, the object of the study being to ascertain the proper dose of the drugs, their general and specific effects upon the patients, the results from their continued use as compared with those from their occasional employment, any unfavorable results, and the general effect of antipyrin and thallin upon the course of the disease.

The following conclusions were reached: 1. Both antipyrin and thallin have a remarkable power of reducing the temperature in typhoid fever. 2. In no case was the use of these refrigerants apparently followed by any unfavorable effect upon the course of the disease. 3. The general condition of the patient was more comfortable after taking antipyrin and thallin, which were often followed by sleep. 4. The refrigerant medication by antipyrin and thallin appears to have no specific or decided effect upon the course or issue of typhoid fever. It often contributes much to the patient's comfort, perhaps indirectly promotes his safety. 5. The effect of antipyrin and thallin in promptly lowering the temperature, shows that the danger in typhoid fever does not consist in high temperature alone, and that the latter is rather an index of the violence of the abnormal condition which we call fever, though perhaps adding somewhat to the danger. 6. By the internal use of antipyrin and thallin all the effects which are claimed for the treatment of typhoid fever by the cold bath are readily obtained without the trouble and inconvenience of the latter method, and without exposing the patient to the dangers of exhaustion and shock consequent on the fatigue of removal from bed. 7. These remedies may be given without danger to the youngest patients in suitable doses; and, indeed, their beneficial effects are more decided and the unfavorable consequences are less observable than with adults.

Dr. Atkinson, of Baltimore, said that so far as the temperature reducing power of these agents is concerned, there can be no question that we are coming more and more to realize that elevation of temperature is far from being all there is in pyrexia. As regards the relative merits of thallin, antipyrin and antifebrin, the tendency to chilling after the use of thallin is decidedly greater than after the use of antipyrin, while the latter is more apt to produce nausea and vomiting. He was disposed to disagree with the statement that the use of these drugs can take the place of the external application of cold water. It has recently been reported that one observer abroad had treated two hundred cases in private practice by the use of baths with a mortality of nothing, in army hospitals he has had a mortality of five per cent., and in ordinary hospital practice a mortality of less than eight per cent. Although with antipyretics we can reduce the temperature at pleasure, yet the duration of the case is not lessened, and in some cases it has been thought to be prolonged.

Dr. Wood remarked that we must not look upon the use of cold water as acting merely by the abstraction of heat. Its action is more than this. It probably exerts some influence through the superficial nerves.

Dr. George L. Peabody, of New York, had found that a certain proportion of cases which does not bear the cold bath will bear the use of antipyretic drugs, while, on the other hand, the bath may be used in a certain number of cases in which antipyretics cannot be applied. From clinical experience he was convinced of the truth of the statement of Dr. Wood, that the cold bath accomplishes more than the simple reduction of temperature. Its soothing effect upon the nervous system is greater than that accomplished by the reduction of temperature by antipyretic drugs. He believed that in many instances the course of the disease is favorably modified by the use of the cold bath. Another important matter is that since the introduction of these methods of antipyresis, the number of relapses seems to be greater and more fatal. He differed from Dr.

Wood on the point that antipyrin acts solely by diminishing heat production, and that it does not increase heat dissipation. It seemed to him that the increase of heat irradiation from the surface is very great, not only where it produces sweating, but also where it does not.

Dr. W. H. Welch, of Baltimore, said that it was a question how far rise in temperature is an important element in fever, and an element which calls for interference on the part of the physician. There is comparatively little evidence that the grave symptoms of fever are referable to the elevation of temperature. There is no doubt that temperatures of 110° to 113° produce serious symptoms, but whether or not ordinary temperatures of 105° to 107° exert any serious action on the body, is a question which is certainly unsettled. It has been shown that rabbits can be kept in a box with a continuous rectal temperature of 107° for at least two weeks, provided the precaution is taken to keep the box well ventilated and the animals supplied with moist food. Patients may have a perfectly clear brain and no grave symptoms, with a temperature of 106° or 107°. On the other hand, there are severe and fatal cases of typhoid fever in which the temperature has never registered a great height. While in most cases there is a certain proportion between the height of the temperature and the severity of the disease, yet there are certain cases in which this proportion does not exist.

Dr. William Pepper, of Philadelphia, had been disposed, from his experience, to think that antipyrin and antifebrin are superior to thallin. Between the two former he had not noticed any marked difference. He had used both largely in a variety of cases, and had not seen any of the dangerous symptoms which have been mentioned by some writers. The action of these drugs seems to be purely through the nervous system. He had seen no effect upon the circulation, upon the respiration, or upon the secretions, save that of the skin. Some of his observations have been of interest with reference to the relative value of the external use of cold water and the internal use of antipyretics. In the sudden acute pneumonias of children with a temperature of 106° or 107°, with initial convulsions, where the prompt and repeated use of cold baths has been without gratifying results, full doses of either of these antipyretics have produced a remarkably successful effect. In a recent case in a child with double croupous pneumonia involving two-thirds of the left lung and one-third of the right lung, with a temperature in the rectum of 107°, and with repeated convulsions, cold baths failed to relieve the symptoms, although repeated at intervals of three hours. Antipyrin in repeated doses controlled the pyrexia at the beginning and on several occasions during the course of the disease, and after a severe struggle the child recovered. As to the ability of these agents to replace cold baths under all circumstances the evidence is not adequate. In the sudden hyperpyrexia occurring in the course of rheumatism he was not prepared to accept the view that these drugs are capable of replacing the cold bath. In these cases we have direct evidence that the high temperature is the direct cause of the symptoms, at least of the severe nervous symptoms. He was not one of those who consider high temperature in itself a dangerous symptom. There is no proof that high temperature, provided that it has not induced secondary changes, should be regarded other than as one symptom of the disease. He had had many patients with typhoid fever with a temperature of from 103° to 105°, who had done perfectly well without any measures directed to the reduction of the fever. We, however, meet with cases in which these temperatures are attended with certain symptoms for which there is apparently no other cause. In such cases we must consider that the hyperpyrexia calls for treatment. He had noticed the effect, to which attention has been called, that is, the deep and tranquil sleep which follows the administration of these antipyretics.

Dr. George C. Shattuck, of Boston, had used both antipyrin and antifebrin largely, and he thought that antifebrin offered all the advantages of antipyrin without its disadvantages. It has none of the disadvantages which belong to thallin. Three or four grains of antifebrin accomplish the same results as are produced by a larger dose of the other drugs. The disagreeable symptoms which some writers have referred to as following antipyrin are probably due to the fact that they follow the original recommendation and give 30 grains of the drug. The same benefit can often be obtained from 15 grains and often from 7 grains. With reference to the point suggested by Dr. Welch, he said that whether pyrexia is or is not a dangerous feature of the disease, we find clinically that where a patient has high fever, is irritable, impatient and uncomfortable, the administration of one of these antipyretics, or the external use of cold water, produces a tranquil and refreshing sleep, and the patient awakes in a condition much better to continue the struggle with the disease.

Dr. J. C. Wilson, of Philadelphia, agreed with other speakers that antifebrin has many advantages over thallin, particularly in its cheapness and in the smallness of the dose. A recent observation which he had made is interesting as bearing on the question of heat dissipation. He had been treating a case of typhoid fever in which, from time to time, antifebrin in five-grain doses was given. These were repeated whenever the temperature reached 104° F. This caused copious sweating, with the usual reduction of temperature, amounting to three and a half or four degrees. On the last occasion one ninety-sixth of a grain of sulphate of atropia was given with the antifebrin. No sweating occurred, and the temperature was reduced only one and one-half degrees.

Dr. James T. Whittaker, of Cincinnati, differed from the gentlemen who seem to accept the view that fever is a neurosis. He thought that there is no proof that the nerve-centres are distinctly irritated, and we have no proof that the agents which reduce fever act directly on the nervous centres. Is it not more probable, he asked, that the antipyretic action is really an antimicrobic action? We have some observations which go to show that the disease is caused by bacteria, or if not directly by bacteria by some of their products, the ptomaines. Would it not be more rational to study the habits of these bacteria and address ourselves rather to the removal of the cause than to the counteracting of the effects?

Dr. H. M. Lyman, of Chicago, said that with regard to antifebrin and antipyrin his experience has been that of previous speakers, and his preference is for the former drug. He was disposed to regard their great value as proceeding not so much from their power to reduce temperature as from their general effect, especially upon the nervous system. He regards them as valuable adjuvants in the treatment of disease, largely from their hypnotic and tranquillizing effect upon the nervous system, to which allusion has already been made. He has observed that in many instances where, in abrupt febrile affections, relief has not been secured from antifebrin and and antipyrin, this failure is frequently due to the presence of the condition we call rheumatic, and there salicylic acid gives the relief that we fail to get with the antipyretics.

Dr. John Guitéras, of Charleston, had some experience with these drugs in the treatment of the continued fevers of warm climates, but here the results have been rather negative, and have showed the advantage of stopping their use after they have been continued for a certain length of time. He had been called in consultation where the drug had been continued for ten or fifteen days, each time that it was given producing a certain reduction of the temperature, but having no permanent benefit, and the patients have begun to improve so soon as the drug was stopped. It has seemed that when given continuously in this way these antipyretics have an effect on the vasomotor system. The pulse is weak and dicrotic, and he considers it advisable to give digitalis. The effect of cold-water baths in these continued fevers of the South seems more beneficial. If continued for two or three days, they often favorably modify the course of the disease.

Dr. Peabody, of New York, said with reference to the point suggested by Dr. Whittaker, that there was no question in his mind that a considerable proportion of cases of typhoid fever can be aborted by antiseptic treatment of the intestinal ulcers with naphthaline or resorcine. For the past two years he has treated all cases coming under observation during the first ten days of the disease with a calomel purge (ten grains), followed by naphthaline in such doses that at least seventy or eighty grains are taken during the twenty four hours. Under this treatment he had without doubt succeeded in aborting many cases in which the symptoms were quite pronounced. He has not succeeded in cases coming under observation at the end of the second week.

Dr. H. C. Wood, with regard to the dissipation of heat by sweating, stated that in the dog, on which the experiments were made, there are but few sweat-glands; there are a few in the paws and about the mouth, so that there could be no heat dissipation from this cause. Sweating in man does undoubtedly cause a dissipation of heat. With reference to the possible influence of antipyrin on fever, through some action on the bacteria causing the fever, he said that in the experiments to which he had referred no microbes were concerned in the production of the fever, which was induced by the pyogenic principle of pepsin.

Dr. James Tyson, of Philadelphia, reported a recent case of rheumatism in which the temperature suddenly went up to 105°, with alarming brain symptoms. Antifebrin in five-grain doses failed to produce any effect. The patient was then put into a cold bath, and the temperature of the water gradually reduced to 72°. The discomfort experienced by the patient then prompted his removal from the bath. The thermometer in the rectum showed a reduction of only one-half of a degree, but within the course of half an hour the temperature fell three degrees. He scarcely thought that this was a natural defervescence, but must attribute it to the effect of the bath. The fall in temperature was followed by a disappearance of all the symptoms and the recovery of the patient. While he had never seen any serious results from the use of thallin and antipyrin, yet there have been symptoms which caused much alarm to the attendants. He had not seen such symptoms follow the use of antifebrin.

Dr. R. P. Howard emphasized the fact that internal antipyretics and the cold bath are not equivalents, they are substitutes and important auxiliaries to the physician. These measures relieve special symptoms, but whether or not they shorten the duration of the disease, is a question not yet settled. Another important point is with reference to relapse in typhoid fever. This is a subject which requires investigation. He thought that every relapse, so-called, is due to the absorption of fresh poison. It is really a fresh attack, an initial attack which runs a severe course, and often proves fatal.—*Medical News.*

THE FINANCIAL VALUE OF SANITARY SCIENCE.

The "Financial Value of Sanitary Science" formed the text for an able address given by that veteran worker in sanitary science Mr. Edwin Chadwick, at the annual meeting of the Association of Public Sanitary Inspectors last week, and no man probably ever had more qualifications for the task, or could speak from such experience and with great authority as this esteemed President of the Association of Public Inspectors. As complimentary to the recent Parliamentary Budget, he submitted by way of example for the "health of nations" the financial value of properly qualified sanitary science.

First referring to the amounts of money charged upon the community arising from the excessive sickness and mortality which had been proved to be preventable by sound sanitation, he said some approach might be made to estimate the amount of those charges from the ascertained incomes of the life-insurance companies, which perhaps did not comprise more than two-thirds of the population. There were some ninety-three of these companies, comprising almost exclusively middle-class persons, of which companies the annual income was stated to be £23,000,000. There were also the great friendly societies of all sorts, whose aggregate insurance charges, as stated upon the authority of Sir James Paget, were £25,000,000 annually; the two yielded a total of £48,000,000 annually, three times the amount of poor rates. And if they could ascertain the full number of the uninsured, he expected that the whole number would double the total Budget for both the army and the navy, which was stated to be £32,000,000. Thus they had an annual invasion of an enemy, in the form of preventable disease, which every year fought and won a battle against the community, and every year slew in the United Kingdom upwards of 100,000 of the people beyond the present reduced death-rate, all of whom they knew and had proved might have been saved by more efficient sanitation, and at a saving of double the annual cost of the naval and military defences. Of the loss for the killed and wounded—that was to say, for 100,000 deaths of the wage-classes—for every death of an adult there were found to be twenty cases of painful sickness and of disablement and loss of work. The total estimated pecuniary loss for the killed and wounded in civil life might be estimated as exceeding by two-thirds the estimates voted by Parliament for the governmental expenditure of the empire. Even in this metropolis, said Mr. Chadwick, the lowest death-rate place of any capital of the chief States of Europe, or of New York, or of any other great city in the United States, we have shown by what had been done by partial application of sanitary defences, there were upwards of 20,000 killed and wounded annually, which efficient sanitary defences might have saved. All this excessive loss of life as well as of money, when examined, would be found to be due to wastefulness in legislation and administration. The only effective preventive would be found to be in the superior economy of tested and corrected sanitary science. In the metropolis the executive functions were generally carried out under inadequate instructions as to the qualifications required, and without securities that those instructions were duly applied for the protection of the public. In their ill-informed or uninformed condition these local bodies, the vestries, were generally positively unaware of the need of the undivided attention required for sanitary service, and they gave such low salaries as often to leave the chief local health-officers under the necessity of making up their income by private practice—that was to say, curative practice—the difference between curative practice and preventive practice in the new science of sanitation not being perceived by them. A revision and consolidation of preventive functions, now scattered over different and weak departments, and systematised under one department and under unity, with an executive board under the supervision of a Minister of Health, would be found on examination to be necessary for the pecuniary relief of the population from the greatest and most grievous of its burdens, as well as for the advancement of its health and strength and the happiness of its existence. It was due to state that, with all the shortcomings of defective local administration, the advances made in sanitary improvements during the reign of Her Majesty had been greater than in any country in any of the great States.

In France they had only got a centralization against the people chiefly for military levies, and they were now only making slow progress with centralization for the people in their places of work, for the protection of the people in their habitations, and for their protection against tyranny in the productive freedom of service. In France the death-rate was 3 in the 1,000 more than in England, which meant that there was a preventable slaughter there of 112,000 lives more than there was now in England. In Germany the mortality of the army was the lowest in Europe, and there was much to say in the way of example of the economies wrought by it; but under the municipal government the death-rate of the civil population in Germany was very high; it was 6 in the 1,000 higher than in England, which meant a sacrifice of 135,000 more than were now annually sacrificed in this country. In Italy the death-rate was 8 in the 1,000 higher, which implied a sacrifice of 224,000 lives to the wastefulness of ignorance there. In Austria the devastation was still greater even than that; it was no less than 11 in the 1,000 above our death-rate, which occasioned a loss in that empire of upwards of 400,000 more than the present rate in England and Wales. But the death-rate of the army in Russia was three times greater than of the army in Germany; and the death-rate of the civil population, as described by the Registrar-General of France, was still more terrible. To an international arbitration a decisive case could be made out against the extension of such bad government over any population. These were examples of the wastefulness of ignorance and sloth against the economics of well-applied sanitary science. In the United Kingdom the mean duration of life had been advanced during the reign of Her Majesty from thirty to thirty-eight years, leaving a further equivalent advance dependent on the advance of a more economical sanitary organization of paid service.

In concluding his able address Mr. Chadwick asked his hearers to accept it as true from one who had seen eighty-six summers that theirs was as good a work as the sun ever shone upon; and that, long before another eighty-six summers should have passed away, it would be recognized as work which deserved the fullest recognition and the most liberal reward, if it were carried out—as he was sure it would be—in the spirit as in the letter, faithfully, vigorously, hopefully, manfully.—*British Medical Journal.*

DR. SENN'S OBSERVATIONS ON LISTER, PAGET AND THE MUSEUM OF THE COLLEGE OF SURGEONS.

ACMedJ (65) 20: 44-47, #1, July 1887.

* * * * * * * *

With such reflections I left this hospital and turned my way towards King's College Hospital, where I was to meet the father of antiseptic surgery. I was full of anticipations of what I should see and learn at the feet of the man whose teachings had revolutionized the practice of surgery throughout the entire civilized world. How great my disappointment! A walk through the wards of Sir Joseph Lister soon convinced me that prosperity and honors, even if well deserved, only too often exert an injurious effect upon the scientific career of distinguished professional men. Sir Joseph Lister of to-day is only the shadow of Mr. Joseph Lister of 1876. The dressings which I was shown only corroborate this statement. The only thing that was new to me in the way of dressing wounds was the colored gauze, which is used to distinguish it from gauze not rendered aseptic. Great importance is placed upon the disappearance of color on the surface of the gauze, as an indication that the secretions from the wound have reached the surface, an occurrence which is looked upon as a necessity for a change of dressing. A number of lumbar abscesses were shown which had been simply incised and drained, and where the whole dressing was composed of a very thin and small compress of gauze and a layer of absorbent cotton still smaller than the gauze compress. The tension suture, which has been in general use for more than ten years, was shown and explained as though the hearers had never seen or heard of such a thing.

The German command, *Fort mit dem Spray!* has been obeyed here. The antiseptic solution in use is a combination of corrosive sublimate and muriate of ammonia, which is preferred to the simple solution of sublimate. I am firmly convinced of the fact that had Mr. Lister remained as such in Edinburgh, the scene of his former active life, his scientific existence would not have terminated so abruptly, and many additional discoveries and improvements would have been inscribed upon his tablet of fame. Although his scientific career ended with his change of residence to London, Sir Joseph Lister must be considered as the greatest of living surgeons. The seed that he has sown has brought fruit which has been the means of saving thousands of lives. The principles of antiseptic surgery as taught by him have found the most fertile soil in Germany, where the treatment of wounds has been simplified and improved to such a degree of perfection that primary union is the rule, and the dreaded complications, septicæmia and pyæmia, are almost unknown. Indeed, it must be a great source of satisfaction for Sir Joseph Lister to know that the method of practice he promulgated so strenuously for nearly a decade has been perfected by the most prominent surgeons on the Continent, and that through it the principles and practice of surgery have undergone a complete revolution. It is not my intention to abstract from the greatness of Lister, but I cannot but deplore that for nearly ten years he has been but little else than a spectator in the arena of the surgical world.

Among the most pleasant and profitable hours spent in London I must include a visit to Sir James Paget. Around the breakfast-table we discussed for nearly two hours matters pertaining to surgical interests on both Continents. Any one who has had the pleasure of a personal acquaintance with this gentleman will not wonder any longer why he has by universal consent been the leader among medical men, not only in his own country, but almost the entire world, for nearly half a century. It would be difficult to find a man possessed of so many admirable qualities in the same degree which fit him for such a position. A ripe scholar, a clear writer, a model teacher, a successful surgeon, an eloquent speaker, a perfect gentlemen, are happy combinations but seldom found in the same person.

He resigned his hospital positions twelve years ago, and is now devoting his whole time to consultation practice and scientific studies. He is inclined to the belief that antiseptic surgery will eventually mean surgical cleanliness. Although advanced in years, his interest in the welfare of his profession remains unabated, and his habits of industry unchanged. He not only reads the literature pertaining to surgery from every possible source, but is likewise perfectly familiar with the recent advancements in the collateral sciences. Through his kindness I found ready entrance into the museums, hospitals and educational institutions of London.

* * * * * * * *

Nearly a whole day I spent in the Museum of the College of Surgeons, under the kind guidance of Professor Stewart, a distinguished scholar and scientist. By stipulation a number of lectures must be delivered in this institution annually. The present course is given by Prof. Stewart, "On the Comparative Anatomy of the Internal Ear." I had an opportunity to examine the specimens used for illustrating these lectures. and it is safe to claim that no second collection of this kind could be found. A large and valuable library is accessible to all of the members of the College. The Museum contains John Hunter's collection. With this enormous collection as a nucleus, and the liberal donations which have been made by the Fellows and members since its foundation, this museum outranks anything of its kind in the amount of material it contains and the way in which it is classified. The specimens are so arranged that any subject in anatomy, physiology and pathology can be looked up and studied in a remarkably short time with the aid of a complete index, which can be found in its proper place in each section. Almost every subject is illustrated by botanical specimens and specimens of animals, from the lowest to the highest form. Under the head of monstrosities I examined a specimen of a fœtus in fœtu. The fœtus is perfect in every respect, and is surrounded by a thick and dense cyst. The indefatigable energy and great genius of the illustrious founder of this wonderful collection become apparent by the many labels which are marked with his name.—*Journal of the American Medical Association.*

INDICATIONS FOR THE USE OF NITRO-GLYCERINE.

Dr. Trussewitsch, in an instructive paper on the use of nitro-glycerine published in the *St. Petersburger Medicinische Wochenschrift,* and reproduced in summary in the *Lancet,* February 19th, points out that the value of this drug in various affections—angina pectoris, migraine and neuralgia (which he describes as a gioneuroses), as also in sea-sickness, some forms of anæmia, faintness, palpitation and other diseases—depends upon the existence of an irregular distribution of blood, which condition may be inferred from a certain degree of pallor of the skin, especially of the face, often coexistent with a weak pulse and a small, rigid, radical artery, which frequently is situated at some depth. When, on the other hand, headache and neuralgia occur in patients with chronic congestion of the subcutaneous veins of the face, nitro-glycerine is to be avoided; and similarly it is of no use in asthma, when the face is reddened in consequence of emphysema. If, however, a pale face exists with angina pectoris, migraine, giddiness, shock, too hache or sea-sickness, the best results may be looked for by giving nitro-glycerine The regulating effect of the drug exercises an influence over the congestion of internal organs similar to that brought about by blood-letting; and in these congestions, whether of lung, brain or kidney, when they are of a temporary character, the pulse is generally found to be slow and of low tension—a fact which, as the author remarks, is sufficiently well known in reference to the fever-free periods of acute hyperæmia of the lung and kidney. Dr. Trussewitsch lays down as a rule that the condition of the pulse is the best indication for the employment of the nitro-glycerine, and the most trustworthy guide as to the dose with which to commence the treatment. The smaller the radical artery is, the more rapidly it dilates under the action of the drug, and the less the secondary effects produced; on the other hand, the fuller the pulse with a distended radial artery, the less it is affected; and finally, the softer the artery, with a weak pulse, the greater the secondary, and the less the general effects. Single-drop doses of the one per cent. solution are sufficient in cases of small pulse, but with a full pulse it will be found that the full effects cannot be produced with less than two-drop doses. When there is a soft artery with a weak pulse, subnormal doses only should be given—a quarter to half a drop. After the trial dose is given, the patient's sensations of pulsation and pain in the head, as well as the distension of the radial artery under the finger of the physician, will be the guides for increasing the dose. The author finds that the best modes of administering nitroglycerine are the simple dropping of the solution on the tongue, and by means of tablets; much less satisfactory results were obtained when given mixed with water.—*Boston Medical and Surgical Journal.*

THE SENSATIONS OF THE DYING.—It is doubtless the case that in many instances—and perhaps they are the majority—dying persons lapse gradually into an unconsciousness that ends their bodily pain and saves them from the anguish of the final parting with those they leave behind. It is not uncommon, however, for clearness of comprehension to persist to the last, and perhaps it is still more common for some of the special senses to preserve their activity. We think it was Ernst Wagner who, in his "General Pathology," dwelt particularly on the preservation of the sense of hearing in many cases long after the apparent occurrence of unconsciousness, and who tenderly cautioned his readers that this possibility should be borne in mind. The following touching account of the late Dr. Wilson Fox's last moments, when his friend Dr. J. Russell Reynolds was at his bedside, is given in the *Lancet's* obituary: "On the next morning, when obviously and consciously dying, and after his eyes had been fixed for a few minutes on the angle of the room, and as some gray streaks of dawn were entering it, he said suddenly: 'There is a great light—a great glare of light. . . . I feel so strange . . . a glare of light. What is it, Reynolds?' The reply was—'It is the peace of God.' He grasped his friend's hand firmly and said, 'God bless you.'"—*New York Medical Journal.*

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN WILMINGTON, N. C.

Thomas F. Wood, M. D., Wilmington, N. C., } Editors.
Geo. Gillett Thomas, M. D., " }

☞ *Original communications are solicited from all parts of the country, and especially from the medical profession of* The Carolinas. *Articles requiring illustrations can be promptly supplied by previous arrangement with the Editors. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to the* Journal, *by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to* Thomas F. Wood, M. D., *P. O. Drawer* 791, *Wilmington, N. C.*

VITAL STATISTICS AND MORTUARY RECORDS—THEIR NECESSITY.

The Board of Health of North Carolina has reached that point in its development when its work will appear for its true worth among intelligent laymen, and ought to insure the hearty aid of the entire profession. The monthly issue of the *Bulletin* affords an excellent opportunity for the collection and preservation of all statistical matter relative to the health of the State, to be recorded as the sanitary (or unsanitary) histories of the cities, towns, hamlets and whole counties all over the Commonwealth. The aggregate of these returns, after a few years, ought to afford a reliable basis for the promulgation of such advice as it is the province of Health Boards to give to the people. Now, the physicians in every county and town are directly interested in this matter, and with very little thought they will see how much they can aid in this work, and how the result is to redound to their benefit. The lukewarmness that has been evinced in this sanitary work would seem to justify the remarks that Dr. Billings made to a graduating class. He told them that they need have no fear of the sanitarians; that although their work was for the promotion of health and prevention of disease, they could never so far succeed in their divine mission as to do away with the needs for the physician's help, and the health officer should not be considered, in the performance of his duty, as inimical to the prosperity of the practitioner of medicine. For, said he, it matters not how often or how much the other crops failed, the fool crop never missed, and out of the folly of humanity, its violations of the laws of hygiene, its contempt for all the advice that could be given them, its unceasing following out the dictates of perverted appetites and ill-advised customs—out of these fertilizing materials to the crop of disease came the harvest that the physicians reaped. We do not regard humanity in the uncharitable way of the speaker, but we regret to know there exists everywhere some reason for the utterance of Dr. Billings' telling words, and it is the prevention and the cure of the ills that make sick people that have made necessary to a well ordered government and people the establishment and proper sustenance of sanitary boards. The lack of compulsory powers in our laws now, which would oblige every physician to report to his county superintendent, or the local board of health, the cases of infectious diseases as they occur, and the lack of statutes making the certificate of the cause of death, to be signed by a physician, necessary in every case before interment of the body, will, so long as these blanks in our laws exist, hamper very seriously the progress of the Board. For these two sources, the report of diseases, especially infectious, epidemic and endemic ones, and the death certificate of the attending physician, both of which ought to be sent in promptly to the county superintendent, will make out the reports that the Secretary is now striving to secure.

In lieu of the necessary laws, it behooves all the physicians in the State to aid voluntarily in this work, and having it once fairly set at work, its future is assured. For its benefits will be too apparent to allow it ever to stop.

The reports that the newspapers send out, the outcome of sensationalists' and panic-makers' stories are oftener than otherwise entirely without foundation, but they do harm nevertheless, and might be stopped if the denial could come with the authority of the health officials to back it, and if this rebutting statement should have for its authority the weekly or monthly reports from all the local boards of health.

We write this with a full knowledge that great interest has been shown in the work of the health officials, by both laymen and the profession, but so much remains to be done, and the result to be obtained by united, persistent and well-directed effort, will be so full of good to all the men, women and children over whose lives and health we are to keep watch and ward, that no outlay of energy will be unrepaid if the work reaches its legitimate end. The methods to fill out this work need no mention, as the necessary instruction is always ready for distribution from the Secretary's office, and those whose interest lead them to undertake any part of this work, can find ready assistance to their efforts.

We commend these thoughts to the members of the profession, with the assurance they mill meet with their approval, and we hope with so much of their approbation as will awaken their energies in behalf of the sanitary work of the State.

◆

TREATMENT OF NERVOUS HEADACHE.—"After quite a number of trials," says Professor Arnold, of Baltimore, "with various remedies which stand in repute for the relief of nervous headache, I give now the preference in the neurasthenic variety to a combination of ether and tincture of cannabis indica, in doses of twenty drops of the former and ten of the latter. Sometimes these remedies act better after a good night's rest has been obtained from a full dose of chloral."—*Boston Medical and Surgical Journal.*

REVIEWS AND BOOK NOTICES.

THE SCIENCE AND ART OF OBSTETRICS. By THEOPHILUS PARVIN, M.D., LL.D. 8vo. pp. 701.

This work, so long announced as in preparation, has been before the reading public for a few months, not long enough to test it thoroughly, but long enough to enable us to form a pretty good knowledge of its contents. Its author is master of a thoroughly good style, his reputation was established beforehand in his numerous writings and addresses while he was editor of the *American Practitioner.* His scholarship and ripe knowledge were never more evident than when reviewing the works of other authors, therefore when his first systematic treatise appeared it was looked for with eager expectation, believing that we would possess in it a thoroughly good treatise, and in this expectation very few need be disappointed. We would have to except from the above those American students who are thoroughly imbued with the supreme authority of the German School, and who see no excellence but in the servile following of these teachers.

The arrangement of this work differs little from various standard treatises on obstetrics, beginning first with the anatomy of the female pelvic organs and their physiology, followed by a complete consideration of pregnancy, including physiology, embryology, the signs and diagnosis of pregnancy, the management of pregnancy, and the pathology of pregnancy. The third divsion of the book is devoted to the mechanism, pathology and conduct of labor. The fourth division considers the puerperal state, and the last division obstetric operations. There have been very few American works on obstetrics—we believe this to be the third—and it is in every way a thorough exposition of the subject, such a one as we are willing to accept as an exponent of the best obstetric teaching in this country.

If we had a disappointment in reading this volume, it was the lack of personal views of the author, glimpses of which we have caught from his reported clinics and society debates. It is not necessary to pass in review all the sections of this work, if we had the space, but we can safely take the chapter on Puerperal Fever as an example of the thoroughness and conservatism of the author.

It was a little odd to see Dr. Oliver Wendell Holmes quoted as authority on the contagiousness of puerperal fever, but so it is, he having done more by the publication of his essay on "Puerperal Fever as a Private Pestilence" in 1843, to correct the old error promulgated in this country of the non-contagiousness of this fever, we are informed, than any other American physician. We have here laid down for us a clear exposition of the heterogenetic origin of the disease, and in his summary he says: "From what is known of the so-called puerperal fever it should not be regarded as a specific disease, and strictly speaking there is no puerperal fever, that which is so denominated being a febrile affection caused by the entrance into the system of a poison from without, the nature of which we do not know, the entrance taking place through a wound of the uterus, or some part of the vulvo vaginal canal."

The conduct of labor, as set forth by the author, is based upon a plain common-sense view of the germ theory, and it is needless to say that we find none of that far-fetched employment of antiseptic sprays and other things which have attracted the attention of some otherwise resonable people. Prof. Parvin goes so far as to look after the healthful surroundings of his patients (particularly of sewage gas, a nuisance which we are thankful to record has not penetrated into many Southern lying-in chambers), that the woman take a warm bath at the beginning of her labor, and that afterward she be given a wash of a two to three per cent. carbolic acid solution for the external genitals, and if the labor be prolonged, a vaginal injection of it being given once or oftener. That the physician and nurse wash their hands in a three to five per cent. carbolic solution. The physician should also, besides washing his hands in this antiseptic solution, anoint them with carbolized cosmoline or iodoform and cosmoline before each examination. All metallic instruments should be prepared by dipping in hot water and afterwards a five per cent. solution of carbolic acid. No soiled clothes, or vessels containing evacuations from the bowels or bladder should be allowed to remain, and all soiled clothes should be removed." We quote these precautions, not because they are extraordinary, but because they are the simple, reasonable practice in vogue by the best obstetricians, as in contradistinction to the fussy details of some German writers and their servile followers.

The young physician who should make it a rule to master thoroughly one good work on obstetrics cannot do better than to take this one as his text-book, and the veteran practitioner will find here all he can reasonably want to refer to upon the best current practice of the day.

TEXT-BOOK ON SURGERY, GENERAL, OPERATIVE AND MECHANICAL. By JOHN A. WYETH, M.D., Professor of Surgery in the New York Polyclinic ; Surgeon to Mt. Sinai Hospital, etc., New York. D. Appleton & Co. 1887. Large 8vo. Pp. 775. Leather. Price $8.00.

Of the many text-books on this subject offered to the profession recently, none exceed in practical value this work of Prof. Wyeth.

The first chapters are devoted to procedures in minor surgery, with description of the methods of preparing and preserving the apparatus needed for dressing wounds in the antiseptic practice of to-day. Illustrations of the paraphernalia of the operating room are added to those usually seen in text-books, which must be of the greatest value to those practitioners who have not the opportunity of visiting and seeing for themselves the methods now practiced in the hospitals. The colored illustrations accompanying the text on ligation of arteries with the anatomy of parts, is one of the best portions of the book.

The author, long a teacher of practical anatomy, seems to anticipate the wants and necessities of the practicing surgeon, and thereby has produced a work most admirably adapted to his requirements.

The subject of deformities of the spinal column, as that also of the lower extremities, with accompanying cut of the various appliances, is well elucidated and fully accords with the present teachings.

The treatment of wounds of the abdomen is not as full as one might expect in a work of this character, and one which is now securing so much attention at the hands of surgeons.

The chapter on diseases of the genito-urinary organs receives a good portion of the author's notice, and is a most excellent review of this subject.

On the whole this work is strictly a text-book, giving merely the details of surgical procedures, with little outside matter, and we do heartily recommend it to our medical brethren as a friend they may consult with confidence when in need of aid.

A Manual of Weights and Measures, Including the Principles of Metrology, etc., with Rules and Tables. By Oscar Oldberg, Pharm. D., Professor Pharmacy Illinois College of Pharmacy, etc., etc. Second Edition, Revised. Chicago: Chas. J. Johnson, 105 Madison Street. 1887. Price $1.50.

This work has met with the approbation of the profession of pharmacy in the United States, its author being a member of the committee of revision of the Pharmacopœia for 1880, and as it has reached its second edition in two years its usefulness has been endorsed. The standards of weights and measures are discussed, and the old methods compared with the new, so that one can get at a glance all that is necessary in the laboratory or in any other place where such information is needed. The metric system is discussed at length, although we believe the author himself is no longer such an ardent advocate of this system for the general use of physicians and apothecaries. In this book will be found all the necessary tables for converting the old standards of weights and measures into the metric system, and also the determination of specific weights. There is also a table of thermometric equivalents between the "F." and "C." scales. No pharmacist could well do without such a volume, and the general medical reader who is not familiar with the language of the metric system will find it a convenient reference book.

A Practical Treatise on Impotence, Sterility and Allied Disorders of the Male Sexual Organs. By Samuel W. Gross, A.M., M.D., LL.D. Third Edition, Thoroughly Revised, with Sixteen Illustrations. Philadelphia: Lea Brothers & Co. 1887.

This book was popular from its very first introduction, and we notice by the preface that it has been translated into the Russian language. The author has divided impotence into four different forms, viz: atonic, psychical, symptomatic and organic. Dr. Gross enjoins upon practitioners not to assume that because a man is able to ejaculate he is capable of procreating, and should never pronounce his opinion until the spermatic fluid has been examined with the microscope; and, according to his statement, where there was sterility, the husband was at fault 33 cases out of 192, or 17 per cent. The descriptions of the diseases which lead to sterility are treated in a rational manner; and, in fact, the treatise elevates the whole subject of sterility from the low plain of the worst sort of empiricism to that of rational medicine, and, in short, makes the practice creditable, whereas, heretofore, a large number of these cases have resorted to professional quacks. But no word of commendation may be needed from us about a book which is so well known, but one thing we may be sure of, Dr. Gross has done vast good to the profession in laying down the rule that the husband should first be examined as to his virility before the wife should be placed in the hands of the gynæcologist for treatment for sterility.

THE VEST POCKET ANATOMIST (founded upon Gray). By C. HENRI LEONARD, A M., M.D., Professor of the Medical and Surgical Diseases of Women in the Detroit College of Medicine. Thirteenth Revised Edition, Enlarged by Sections on Anatomical Triangles and Spaces, Herniæ Gynæcological Anatomy and Dissection Hints. Detroit: "The Illustrated Medical Journal Co., 1887." Cloth, 86 Illustrations, 154 pages, post-paid, 75 cents.

This little volume in its former editions is so well known that it is only necessary to confine our notice to this, the *thirteenth* edition, which contains very clear and accurate topographical plates of the Venous, Arterial and Nervous systems, photo-engraved from the English cuts in Gray's Anatomy. This makes the work especially of value to accompany the surgical case of any practitioner that is doing much work in this line, who may wish at his hand a "regional reminder" of the placement of arteries and veins that he may wish to avoid in making his incisions. For this special purpose this little book, since it has the addition of these 86 engravings, is of a good deal of value to the country practitioner who sometimes does not have the time to return to his office to consult his more pretentious volumes. The "Dissection Hints" show the incisions to be made in post-mortems to advantage.

THE SCHOOL TEACHER

Is a handsome, large monthly 4to magazine, published at Winston, N. C., under the editorial management of J. L. Tomlinson and W. A. Blair. It is a matter of sincere congratulation to the friends of better and more thorough education in our State, and we most heartily congratulate the editors of this handsome monthly upon the conspicuous part they are taking in urging forward the great movement. Let not our people forget that the way to make our University and the colleges attain to a higher grade of scholarship is for the common schools to do their work more thoroughly. If students are not well grounded in the preliminaries the drudgery of elementary teaching must fall heavily upon the college professor whose time should be spent in higher work. All along the line, though, we are rejoiced to say, education is advancing, and the citizen, be he editor or humble school-master, in his plain log-cabin school, who is forwarding this movement, is doing for his State a noble work.

THE LIBRARY MAGAZINE.

Truly a literary revolution! For $1.00 a year this excellent monthly may be procured. It is in all respects equal to the best literary journals, printed in large clear type, in a square, handy-size volume of 75 pages. The selections in this magazine are from the best living authors, American and foreign. There is not one of our readers who will not thank us for calling attention to this publication if they do not already know it.

WYTHE'S PHYSICIAN'S POCKET DOSE-BOOK

Is among the list of old friends. By alphabetical arrangement one can refer to articles of the Pharmacopœia, and by a second division of the book to the Preparations. There are full tables of weights and measures, rules for dosage, and aids to prescription-writing, tables of poisons and antidotes, hints on treatment and a table of symptoms—very much matter to be contained in a book convenient for the side-pocket.

A SYSTEM OF GYNÆCOLOGY. By American authors. Edited by MATTHEW D. MANN, A.M., M.D.,

Is announced by Messrs. Lea Brothers & Co.; also,

A SYSTEM OF OBSTETRICS. Edited by BARTON COOKE HIRST, M.D.

The whole will be issued in four volumes to be sold by subscription.

CORRESPONDENCE.

IS A CHEMICAL ANALYSIS A SUFFICIENT GUARANTEE OF THE SAFETY OF DRINKING WATER?

Messrs. Editors North Carolina Medical Journal:

After experience had shown that drinking water was the great medium through which the poison of typhoid fever was introduced into the system, chemistry stepped in and discovered that, as a rule, water known to have caused typhoid fever contained an albuminoid substance derived or derivable from human excrement. In the absence of direct proof it was assumed that this substance was the poison, which, when introduced into a proper human subject, developed typhoid fever. Consequently drinking waters were characterized as pure or unwholesome as they did not or did contain an appreciable amount of this substance. This remains so to this day. While it may be, and doubtless is, true that water containing a certain amount of this albuminoid substance is unfit to drink, is the converse of this true? May not the bacillus of typhoid be present in water which does not contain the albuminoids? This is an important practical question, because a great many persons rely upon the chemical analysis of the water from their wells to determine its wholesomeness or the danger in using it.

Very respectfully,
J. R. Campbell, M.D.

[The question which Dr. Campbell has propounded is one which cannot be positively answered in our present state of knowledge. We can say this much with certainty, that chemical science has not alone been able to determine the safe potability of water, and that chemical and biological and microscopic tests combined cannot demonstrate with certainty the absence of disease-producing elements. The test that the best knowledge gives us is approximate assurance of the harmlessness of certain waters. The more experienced the chemist or sanitarian, the more cautious will be his reply with regard to the purity of water, and always will he require full information of the surroundings of the source whence the specimens are obtained. The presence of *chlorides* and albuminoid ammonia in water in certain proportions leads to suspicion, which may be safely heeded, but their absence does not give assurance that disease-producing elements may not be present. As we naturally look for disease-producing elements in dejections from the body, and such dejections in sewage matter, so would we infer that in water containing albuminoid ammonia and chloride of sodium its source of contamination was from animal dejections, and therefore dangerous, and if not dangerous, repulsive to our very nature. Science does not go so far as to say that conversely all water free of such impurities is good, but common experience, even in this case, leads us to scrutinize the surroundings of the supply in all cases. The existence of "disease germs" may depend upon nitrogenous and saline elements or may not. We have only gone far enough to prove an essential typhoid bacillus, but do not know its life history out of the body. Most of our opinions about drinking water must still remain in the region of probabilities until progressing studies are completed.—Eds.]

Anesthetics During Parturition.—Dr. Fordyce Barker says that "during the past thirty-seven years I have rarely attended a woman in confinement without the use of chloroform, never where she has suffered considerable pain. Having thus used it in several thousand cases, I unhesitatingly assert that in not a single case have I ever found cause to regret its use."—*Boston Medical and Surgical Journal.*

Spermaceti a Substitute for Cod-Liver Oil.—We get a valuable suggestion from an editorial in the *Medical Times,* June 11th, calling attention to spermaceti as a substitute for cod-liver oil, as recommended by Prof. Senator. Finely pulverized, mixed with sugar and flavored with oil of lemon, it can be taken in teaspoonful doses without producing nausea. Two and a half to five drachms of the mixture may be taken and digested and absorbed in the course of the day. The further suggestion of the use of soap—sapo medicinalis—as a substitute for fats, in pills or capsules, for the same purpose, will not be likely to meet with much favor.

DR. C. J. O'HAGAN.

We welcome the news of Dr. C. J. O'Hagan's election to the Vice-Presidency of the American Medical Association, and we know that every member of our State Society will join in the congratulations to our friend. There never has been in any organization a man whose kind and dignified manners, great intellectual worth and exceeding generosity have entitled him to more genuine respect and affection than Dr O'Hagan has obtained and holds without question in the State Society, and all the honors he obtains make glad the hearts of his friends. The JOURNAL extends the hand of friendship and congratulation to the Doctor.

* * *

A TOO CONFIDENT scanning of proof-sheets led us into the blunder last month of printing an extract from a metric address of Dr. John Godfrey, M. H. S., without crediting him or the *News and Practitioner* with it. We enjoyed the clever address enough to reprint a selection, and now desire to apologize to the author, the *News and Practitioner* and our readers for the error.

We have also to regret that the important Presidential address by Dr. Bahnson appeared with some gross errors. We made him say that he regretted the presence of some of the older members, when he intended the opposite. He addressed the Society as "fellow-citizens," when the manuscript said fellow-members, and the worst of it all is that we cannot accuse Dr. Bahnson's MS. of being written badly. The fault is all ours, but before this will have reached our readeas they will have assigned the errors to our very skilful printers, putting the proper construction upon it themselves. But we regret these blunders very much, and will be more alert in the future.

* * *

A GOOD DENTIFRICE.—Precipitated chalk forms the best basis for a tooth-powder, to the base of which may be added pulv. saponis and ol. eucalypt., a drachm of each; and, if there is no objection to the taste, half a drachm of carbolic acid.—*Lancet.*

NOTES.

Dr. Hunter McGuire received the degree of LL.D., from the University of North Carolina at its last Commencement.

Lactic acid in the green diarrhœa of children, recommended by Prof. Hayem on the microbian of the disease. He administered it in solution of 2 of acid to 100 of water or other suitable vehicle, a teaspoonful being given to a child a quarter of an hour after nursing. During 24 hours 5 to 8 teaspoonfuls are given.—*American Journal of Pharmacy.*

Map of Arctic America.—We are indebted to "Science" for a map of Arctic America by Dr. F. Boas, which is worth careful examination and preservation. Science has earned a substantial reputation by the subjects of scientific interest discussed in its pages; the range of subjects is very broad and the contributions from the very best writers.

New Remedy for Ringworm (*Siegesbeckia Orientalis*).—This new remedy for ringworm has been tested by Dr. J. Hutchinson, Glasgow (*British Medical Journal,* June 25th, 1887), and he considers it speedy and reliable. It is a composite plant of the sunflower tribe, a native of the Mauritius, where it enjoys a reputation as a remedy in gout, syphilis, scurvy, scrofula, etc. The preparation is made there by bruising the leaves of the plants and adding sugar to make a syrup. Dr. Hutchinson uses the tincture in combination with equal parts of glycerine.

The Hobnail or Gin-drinker's Liver not Diagnostic of Drunken Habits.—I myself once testified in a court of justice in an insurance case—and I know of other physicians who have done so—that "a certain person who had a large, fatty liver, to our best knowledge and belief, was not likely to have been a hard drinker during life, chiefly because at the autopsy no cirrhosis of liver was found." This was fully in accord with the teaching of our masters in medicine and with text-books. Yet, I am sorry to say, it is entirely wrong; and the jury decided against the insurance company on account of such erroneous medical testimony. My experience has since taught me that cirrhosis with contraction of the liver is at least as rare an affection in drunkards as it is in "teetotallers," and that the traditional "hobnail" or "gin-drinker's" liver is not diagnostic at all, while the large, fatty liver is one of the most prominent signs of alcoholism."—*Prof. Formad in Transactions Association of American Physicians*, 1886.

FISCHER has found that the air of the Atlantic Ocean, a certain distance from land, is free from bacteria, but that the number increases with the approach of land. The air near continents or large islands is much richer in bacteria than that near small islands.—*Medical Standard.*

SACCHARINE.—Saccharine, which has recently been introduced into therapeutics as an excessively sweet material, three hundred times sweeter than glucose, is likely to prove of considerable service. According to Anducco and Mosso it has very high antifermentative and antiseptic properties. It is recommended for internal administration to diabetics, with a view to rendering their food more palatable. It passes unchanged through the organism, and may be detected in the urine in its original condition. In cases of indigestion or where the intestines are the seat of abnormal fermentations and acidity, it is extolled as an antiseptic.—*London Lancet.*

ANTAGONISM OF STRYCHNINE AND ALCOHOL.—The results of the experiments of Jarochewsky on dogs are summed up as follows: Strychnine prevents alcoholic inebriation; at the same time it enables the organism to support large doses of alcohol for a very long time, it preserves the organs (liver and vessels) from the characteristic alterations produced by alcoholism. The action of strychnine is, up to a certain limit, paralyzed by alcohol; beyond this limit strychnine becomes poisonous to the inebriated animal. Strychnine is an excellent medicament in all forms of alcoholism. It is a powerful prophylactic.—*American Journal Pharmacy.*

[If these conclusions apply to man, it demolishes the stock story of the day about the fearful harm from alcoholics being from their adulteration with strychnine. It would seem that strychnine in proper quantities would enlarge the capacity to drink alcoholics without harm. We await more extended experiments upon man before we can adopt Jarochewsky's results.—EDS.]

SOME OF THE RARER SYMPTOMS PRODUCED BY GALL-STONES, is the subject of an instructive address by Dr. William M. Ord, London, in the *British Medical Journal* of March 5th, 1887. He gives us most interesting observations under the headings "gall-stones passed without symptoms; gall-stones giving rise to pain, etc., without jaundice; producing intermitting pyrexia; producing glycosuria; gall-stones and reflected visceral inflammation; gall-stones and malignant disease of the liver; gall-stones and hæmorrhage." The author in a concluding paragraph says: "The various effects of gall-stones which we have passed under review may well make us pause and meditate. We have to deal with biliary colic very often; to know it as a process involving intense pain and many other distresses; to see it make its progress commonly to a satisfactory end. As regards the suffering produced, we are impelled to do all we know towards relief; as regards the outcome, we may be generally hopeful, if not confident. Biliary colic being the most commonly apparent indication of the presence of gall-stones, we may be ready to see in gall-stones things productive of much suffering, but having in their aspect more of the troublesome than the deadly. Gall-stones, indeed, travel so commonly by the same line, that we tend to believe that, in spite of delay occurring now and then, the terminus must be reached. The consideration which I have very imperfectly put before you may remind us of many possible accidents of the journey. A permanent block occurring on the line sends the travelling stone into many by-ways of disaster. We may find the stone in such a case causing perforation of the gall-bladder, causing intermitting pyrexia, causing glycosuria, causing distant inflammations, probably malignant disease, and certainly serious hæmorrhage. I rise from the contemplation with increased respect, born of sad experience, for the gall-stone. If biliary colic be no very terrible illness, the gall-stone is to be dreaded and feared, in proportion as there is less of the colic and more of accessory symptoms."

[The writer is reminded of how serious symptoms caused by gall-stones may disappear without treatment. A multipara had an abortion at the fourth month. Her case excited unusual alarm because of a deep jaundice which set in a week or so previously. The patient had become very emaciated, and the abdominal walls were thinned sufficiently to detect the enlarged gall-bladder with contained gall-stones. Realizing the extreme danger of jaundice during pregnancy, the gravest prognosis was imparted to the family. The abortion terminated favorably, and with it the discharge of gall-stones, and an unexpectedly early restoration to health in consequence. Such cases, we believe, are rare.—EDS.]

BOOKS AND PAMPHLETS RECEIVED.

Anæmia. By Frederick P. Henry, M.D.

Antiseptic Midwifery. By H. J. Garrigues, M.D.

Practical Bacteriology. By Thomas E. Satterthwaite, M.D.

The Modern Treatment of Eczema. By H. G. Piffard, M.D.

Annual Report of the North Carolina Experiment Station for 1886.

Nasal Reflexes as a Cause of Diseases of the Eye. By W. Cheatham, M.D.

Infants, their Chronological Progress. By Prof. Stanford E. Chaillé, M.D.

Transactions of the Rhode Island Medical Society. Vol. III. Part IV. 1886.

Granular Conjunctivitis, with and without Pannus. By W. Cheatham, M.D.

The Physical, Pathological and Therapeutic Effects of Compressed Air. By Andrew H. Smith, M.D.

The Physicians' Leisure Library. Published by George S. Davis Detroit, Mich. Price 25 cents each.

Pregnancy, Parturition and the Puerperal State and their Complications. By Paul F. Mundé, M.D.

The Surgery of the Pancreas, as based upon Experiments and Clinical Researches. By N. Senn, M.D.

The Treatment of Hæmorrhoids. By Charles B. Kelsey, M.D. The Physicians' Leisure Library. No. 1, 1887. Issued monthly by George S. Davis, Detroit, Mich. Price $2.50 a year; single copies 25 cents.

NORTH CAROLINA

MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., }
GEO. GILLETT THOMAS, M. D., } Editors.

Number 2. Wilmington, August, 1887. Vol. 20

ORIGINAL COMMUNICATIONS.

PUERPERAL ECLAMPSIA.

By F. W. Ritter, M.D., Mayock, Currituck County, N. C.

Among the most dangerous complications of pregnancy, and probably only secondary to post-partum hæmorrhage, are those cases of puerperal eclampsia, taxing the resources of the physician to the utmost and rendering it an imperative duty on every one who practices midwifery to make himself thoroughly acquainted with its preventive and curative treatment.

The reprehensible practice of parturient women in this section of trusting themselves during labor in the hands of ignorant and incompetent midwives, debars the physician from seeing eclampsic patients in time to take advantage of the precursory symptoms that are occasionally present, and too frequently he is only called in after the supervention of coma; and the life of the fœtus, and often of the mother, is the sacrifice.

Normal, physiological labor is a process that ordinarily needs, or tolerates, no interference; but owing to the present modes of living, and what is ostensibly termed refinement, by which the physical development of the female sex is prostituted to the dictum of fashion, truly natural labors are not common, and scientific midwifery is becoming more and more a necessity.

It is not my aim in this article to suggest any new treatment for puerperal eclampsia, but to urge upon the profession the necessity of attending to those states of the system presented by pregnant patients indicating albuminous urine.

Although Imbert Goubeyre has deduced evidence showing that every case of albuminuria is not necessarily accompanied by convulsions, still it does so in a sufficient number of cases and renders it exceedingly irrational practice to allow a patient, when albuminuria is diagnosed, to go to confinement without making strenuous efforts to restore the balance of circulation, rid it of noxious elements, and, by placing the body in as nearly as possible a physiological condition, pave the way to a safe and pleasant confinement.

Since Luer, Braun, Frerich and Tyson have shown the intimate association of puerperal eclampsia with albuminuria, we have in most cases a key to the treatment, and it is my humble opinion that if women would place themselves under competent medical advice two or three months before confinement, a great many cases might be averted.

I have seen women in confinement suffering from scanty urine, anasarca, dizziness, spots before the eyes, etc., pointing unmistakably to a renal complication, and have been informed by them that these symptoms, with greater or less intensity, had existed a month or more prior to their parturition, and I have yet to see the case presenting the foregoing symptoms that did not eventuate in eclampsia more or less severe. The presence of albumen in the urine of pregnant women does not have nearly the same significance as in the non-pregnant state, and often depends upon temporary causes, still the presence of this foreign element in the urine should speed us to action and warn us not to remain inactive until a permanent and fatal effect is produced.

In the present uncertainty of the pathology of puerperal eclampsia it is important to scan closely the literature and clinical history of a disease so fraught with danger. A great many hypotheses have been advanced purporting to explain its etiology, and each of them with some truth, but no one hypothesis has explained all the phenomena, while some are diametrically opposed by philosophical laws.

W. R. Playfair, in his admirable treatise upon "Obstetrics," gives a succinct account of the pathological condition of puerperal eclampsia as advanced by Braxton Hicks, Kussmaul, Turner and other writers, and discriminates very nicely between apoplexy, epilepsy and hysteria, each of which occasionally complicates parturition, but touches very lightly upon the preventive treatment. The state of the bowels and bladder ought in every instance to be attended to, as a loaded rectum or a distended bladder will in many instances keep up the convulsions and baffle the efforts of the physician, who relies solely upon the administration of drugs. A simple enema, bringing away large masses of impacted fæces or catheterization, relieving the bladder of a quantity of dark, ammoniacal urine, has in numerous instances cut short an attack of convulsions that threatened to terminate fatally. In patients presenting evident symptoms of albuminuria, as a preventive treatment I generally prescribe the benzo-salicylate of lithia in conjunction with fresh hydrangia, which is prepared by the Lambert Pharmacal Company of St. Louis, in doses of 3 to 5 grains of the former and 30 grains of the latter every four hours, or according to the severity of the symptoms, and order the bowels moved twice or thrice daily with confection of senna, which is a mild and very efficient laxative, when, as is frequently the case in the seaboard counties, malaria is present as a complication. Podophyllin and extract. taraxaci will be found excellent cholagogues, and if the patient is at all anæmic, the administration of dilute nitro muriatic acid, combined with the tincture of the chloride of iron and compound tincture of cinchona, will give excellent results.

A steady and persistent use of the lithia, and, where there is a lack of tenacity in the patient, the free use of tincture of iron combined with glycerine to counteract its astringency, while it will not cure a chronic case of Bright's disease, will in nearly every instance relieve the urgent symptoms and give the woman a better chance of a safe recovery. As a useful adjuvant to the above treatment dry friction with a coarse towel or flesh brush, or a Turkish bath twice a week to equalize the cutaneous circulation and open the emunctories of the skin, and passive exercise will be found really beneficial. In multipara, with lax abdominal walls, allowing the uterus to antevert and compress the bladder, a well-fitting flannel abdominal supporter is quite a desideratum, for if the contractile power of the bladder is interfered with by pressure from the gravid uterus, vesical irritation will result.

I give below four selected cases of puerperal eclampsia occurring in practice, with treatment and results:

Case 1.—January 28th, 1887, at 1 o'clock P. M., I was called to Mrs. C. Found her lying on the floor; upon making inquiry learned that while sitting before the fire she remarked to those in the room, "I have a funny, queer feeling," and in a few seconds pitched headlong out of her chair, bruising her head badly upon the hearth and burning one hand slightly. The convulsive seizure lasted only a few moments, and when I arrived she was slightly dazed, but answered questions intelligently. She was not expecting confinement under two or three weeks. I had the bed prepared and put the patient on it, and in about fifteen minutes a severe convulsion came on, during which I administered chloroform. After the paroxysm a digital examination revealed a dilated and patulous os, ample pelvic diameters and the condition of the soft parts good. Having administered a dose of chloral hyd. and pot. brom., which was immediately vomited, I ordered an enema of warm water, which brought away quite a large amount of hard fæces. I followed the simple enema with one of chloral and pot. brom. There being no pains, the os being sufficiently dilated and the membranes ruptured, ¼ grain of ergotine was given subcutaneously every hour. At the end of three hours slight expulsive efforts began to be made, and at 10 o'clock P. M. she gave birth to a small, but well and fully formed male child, which was asphyxiated, but was resuscitated and cried lustily at the end of one hour. This patient had only six convulsions in all, but entered a profound coma after the second attack. She revived in about three hours after the birth of the child, and made a good recovery in three weeks. Mrs. C. presented very evident symptoms of albuminuria when I saw her, and I was informed that she had suffered from scanty urine, anasarca, dizziness, etc., for a month or so prior to confinement. The acetate of potash and spts. nit. dulc. acted like a charm in this case and the anasarca was speedily dissipated.

Case 2.—On March 6th, 1887, at 4 o'clock P. M., I was called by Dr. K., of our village, to assist him in a case of puerperal eclampsia. Upon arrival I found the patient profoundly comatose, having had prior to my arrival forty or more convulsions, unable to swallow, face livid, pulse somewhat feeble. Upon examination found a roomy pelvis, labor in first stage, vertex presentation, os rigid and dilated to about the size of a crown piece, with no expulsive pains. Upon auscultation could detect no fœtal heart-sounds. Chloral and bromide of potash having been given before my arrival, I had extract of belladonna freely applied to the rigid os and began the subcutaneous injection of $\frac{1}{4}$ grain Bonjeau's ergotin every hour to stimulate the natural expulsive efforts, and in four hours under this treatment the uterus began to contract and the os to dilate and lose its rigidity. The membranes were then ruptured, the ergotin suspended, and in two hours more we had the satisfaction of relieving our patient of a medium size fœtus, which was dead. She remained comatose over twenty-four hours before rousing, but never had another convulsion after delivery, and under the administration of diuretics and alteratives made a rapid recovery.

Case 3.—September 21st, 1886, at 9 o'clock P. M., I was sent for in haste to see Mrs. H., aged 17 years, primapara. When I arrived the patient was in a deep coma, the cheeks being drawn in and distended with each respiration, face turgid, carotids throbbing, no expulsive efforts, the abdomen enormously distended, bladder and rectum both empty. Upon inquiry learned that she had been in labor twelve or fourteen hours, and had employed a physician who had left her without making any efforts to subdue the convulsions or to deliver her. She had some forty or fifty seizures before I saw her and two afterwards. Examination discovered the os dilated, membranes ruptured, the fœtal head presenting, and as there was no effort at expulsion and the mother evidently passing to the spirit land, I applied the forceps and had no difficulty in delivering her of male twins weighing, respectively, 8 and 9 pounds, which, however, had evidently been dead sometime. The mother died in a few hours after delivery, having never recovered consciousness.

Case 4.—Primapara, single, aged 13 years, poorly developed for age, had been under a colored midwife for thirty hours and the membranes had been ruptured eighteen hours. The head of the fœtus had impacted the anterior lip of the cervix. The pelvis was very small. The antero-posterior diameter being too short to allow of the passage of the fœtal head by the natural efforts, and these being absent, I applied the forceps, and, after several attempts, delivered her of a very large male child, which ceased to breathe in one hour or so. I could not learn how many convulsions this patient had. It was six hours after delivery before she regained consciousness, and, after suffering from a severe diarrhœa, in about two months she was discharged.

The history of each of the above cases of puerperal eclampsia presented similar features before parturition, none applied for medical advice, and all went to term with anasarca, which had existed in conjunction with the other symptoms of albuminuria for a month or two prior to confinement, and it is the object of this paper to show the general, although not universal, dependence of puerperal eclampsia upon albuminuria, and open a discussion among the fraternity in the hope of finding some treatment prior to parturition that will be an effectual preventive.

PUERPERAL THROMBOSIS AND EMBOLISM OF THE PULMONARY ARTERIES.

By R. A. Patterson, M.D., Aurelian Springs, N. C.

If there is little difference in the symptoms of these rare and fatal affections, there is great difference of view as to their origin, some contending that the obstruction to the circulation is always an embolus originating from a peripheral thrombosis and carried in the blood and deposited in the pulmonary arteries, basing their argument on the assertion that the force of the cardiac pulsation is too great to allow of the deposit and accumulation of fibrin and formation of a thrombus "in situ."

The other party claim that as the obstruction to the circulation in a proportion of the cases precedes the peripheral thromboses, as sometimes happens in phlegmasia dolens, they must proceed from the same cause, viz: that the same abnormal state of the blood which generates the peripheral lesion causes the deposit of fibrin at the bifurcations of the pulmonary arteries or other parts thereof. Rheumatism, fevers, and notably anæmia, predisposing the blood to said deposit; also effete matter from involution of hypertrophied uterus.

Four cases of the malady have come under the observation of the writer within a few years. All had set in before my arrival, so that their history is only partially known.

Case 1.—A colored woman, after a favorable accouchment, was in a few days suddenly attacked with a most painful dyspnœa, pulse rapid and thready, confined to a sitting posture, respiration so rapid as scarcely to admit of utterance. Died in a few hours. The strictest quietude of mind and body, combined with stimulants, seems to be the system of treatment most approved at the present time.

Case 2.—White woman. Found her manifesting the same symptoms, but not so severe. Patient able to walk, which I learned she persisted in doing, and died very suddenly immediately after lying down.

Case 3.—Colored woman. After protracted and difficult instrumental labor was attacked with the symptoms as above described. A few days after phlegmasia dolens attacked one leg. She recovered from both affections in about three months. In this case the pulmonary affection preceding the peripheral would seem to substantiate the belief that the thrombus sometimes originates in the pulmonary arteries.

Case 4.—A white woman about 22 years of age, had borne two children; at fourth month of pregnancy suffered with pernicious anæmia and aborted. Fifteen hours after delivery the lung trouble commenced and progressed steadily. The dyspnœa was most distressing. Full consciousness remained to within a few minutes of the close. Her very anæmic condition, doubtless, favored greatly the deposit of fibrin.

At the late meeting of the State Medical Society, at Charlotte, the writer, wishing to elicit a discussion of the malady, stated that within the last ten years there had occurred in his practice four cases of an affection which he diagnosed to be thrombosis of the pulmonary arteries, and described them as being attended with great dyspnœa and frequent pulse, and asked if any member of the Society had met with similar cases.

These are what were referred to in the minutes of the session at Charlotte, in which the reporter said: "Dr. Patterson mentioned having four cases of difficulty of breathing after labor. One of these died, the others recovered." The error, doubtless, occurred from the difficulty of being heard.

GLIOMA OF THE RETINA; CONVULSIONS; EXTIRPATION OF THE EYE; DEATH.

By Thomas F. Wood, M.D.

Mistakes in diagnosis, if thoroughly recognized and investigated, are capable of yielding valuable lessons to the practitioner. I have overcome my hesitation in making this case public, because I believe its narration may serve to teach the important lesson in diagnosis which I learned by it.

O. S., a boy not quite 3½ years of age, was brought to me for an eye trouble. The cursory examination I was permitted to make of the little patient, who had become peevish by frequent attempts to see his eye, revealed what I took to be glaucoma. The upper lid was prominent and slightly red, having the appearance of ptosis, but still under control of the patient. The globe was hard, but not stony hard, as described in absolute glaucoma. The anterior chamber had the reflex of a glaucomatous eye. There was a great amount of constitutional disturbance and the patient anæmic, and his appetite exceedingly whimsical.

The history of the case as obtained from the mother was that when the child was eighteen months old, while at play, it was seized with a sudden pain in its eye, and came running to her saying he had "got some snuff in his eye." She examined it, but did not discover any snuff. The pain passed off in a short time, or at least he was easily pacified. It was not long after this occurrence that a relative visiting the house remarked upon the peculiar appearance of the child's left eye. As he remarked he "could look deep down into the eye—there was a small clear spot in it." This was about August, 1883, two years after the first symptoms were noticed.

The father of the child was not willing to have an examination made at the first visit, and he returned to his home leaving the impression on my mind that I had absolute glaucoma to deal with, and that nothing better could be promised than an iridectomy for the remaining eye.

On Tuesday, 5th February, 1884, seven months after he was first seen by me, the patient was brought again to me, a distance of ten miles in a buggy. Shortly after his arrival he was taken with convulsions of a most violent character, as described by the friends present. I saw him two hours later, and, learning the condition of the patient from the messenger, I secured the assistance of my friend Dr. W. J. H. Bellamy, who kindly visited him with me. We found him in a state of coma. His lips were cyanotic and covered with frothy saliva; his complexion was cadaveric; his pulse was small and very rapid; his breathing labored. Temperature in the month was found to be 99° F. The left upper lid was perceptibly prominent; there was a hæmorrhagic stain of the lower edge of the sclerotic; death seemed imminent. A hasty examination led us to the conclusion that the life of the child was threatened by the pressure of the globe, and extirpation was decided upon.

Chloroform anæsthesia was attempted, but the breathing was so irregular that it was found impossible and unnecessary. Artificial respiration had to be kept up during the operation. There was the usual amount of hæmorrhage, which was encouraged. After the extirpation was completed the breathing improved and so continued until it became normal in a few hours. The justice of the operation on therapeutic grounds was thus demonstrated.

A few months after, the orbit refilled, and the growth was removed, the cavity being well filled with chloride of zinc paste, and treated for several days. The fatal ending was thus delayed only a few months, the parents of the child declining any further efforts to destroy the growth.

The history of this case covers a period of about three years.

TREATMENT OF SCIATICA.—Dr. Metcalf, of New York, says that no prescription for sciatica has ever equaled in efficacy the following: Tinct. aconit. rad., tinct. colchic. sem., tinct. belladonna, āā ʒj. M. Sig: Dose, six drops every six hours. He also uses triturate tablets, each containing three drops of the following: Tincture of aconite root, tincture of seeds of colchicum, tincture of belladonna, tincture of actea racemosa—equal parts by volume. Dose, one every four or eight hours.—*Journal American Medical Association.*

A PROMINENT English physician claims to have treated 500 cases of typhoid fever without alcohol, with a mortality of only 4 per cent.—*American Practitioner and News.*

THE USE OF ALCOHOL IN FEVERS.

At the meeting of the Detroit Academy of Medicine, March 1st, 1887, Dr. Cleland introduced the discussion of the evening on the subject of alcohol in fevers.

The subject, he said, is one of which I may say I know a good deal practically. It is one thing, however, to practice, another to theorize. Of the importance of alcohol as a therapeutic agent in the treatment of continued fevers, I have abundant clinical evidence, and that importance is now very generally recognized, although in the past there has been much division of opinion among physicians on the subject. Dr. Todd was the first to advocate its use, some forty years ago. There was at first strong opposition to such a mode of practice on theoretical grounds, but there are few writers to-day who do not recommend it.

The maintenance of the body temperature at a certain fixed standard is essential to health; any departure from this standard is indication of disease. In fever there is always elevation of temperature. This implies increased combustion, which may arise from different causes. (1) It may have a purely nervous origin, as in irritative or ephemeral fevers. (2) It may arise from some difficulty affecting directly the heart-centre, which is supposed to be located in the floor of the fourth ventricle—although of late the existence of such a centre has been disputed. At all events, the inhibitory power of the vaso-motor system is disturbed or diminished. (3) It may be due to the action of a *materies morbi* in the blood, and this is the case in the majority of fevers.

Long-continued fever signifies wasting of the body. This is evident in the decline of strength, in the failure of the heart, etc. It is shown also in the increase of the products of combustion (urea, etc). The so-called typhoid condition does not belong to any specific fever. It is the result of a prolonged high temperature, from whatever cause. It is most commonly seen in continued fevers. It is in this condition that alcohol is indicated as the remedy par excellence.

Alcohol lowers the temperature, partly by bringing the blood to to the surface, partly by exciting perspiration; it supports the heart, lowering the number of pulsations, and it saves the tissues, being probably itself consumed. The strength of the patient is certainly maintained under its use, and wasting is held in check.

In certain cases, with a pulse rising and a temperature of 104° to 105°, alcohol will lower the pulse, induce quiet and refreshing sleep, and give tone and comfort to the patient in many ways.

I seldom begin to give alcohol in typhoid fever until about the middle or end of the second week. If the pulse maintains its strength and doses not become rapid, I continue to withhold it.

The best form in which to administer alcohol is that of whiskey, which should be combined with food, generally with milk. The quantity to be given must be determined by watching its effects. If it lowers the pulse and produces sleep, continue it. If the patient becomes excited and the delirium is aggravated, or if the temperature rises, it is doing harm rather than good.

The mistake is often made of giving too little. Where small doses have only an excitant effect, large ones may be sedative. Even large doses do not produce intoxication in these patients.

I have sometimes given very large quantities of alcohol. I remember a case where I gave to a young girl, 11 years old, a tablespoonful of whiskey every 1½ hours for three weeks, and she made a good recovery. To a man I gave about 1½ pints of whiskey every day for several days, and he recovered with comparatively little wasting.

Dr. Andrews: Opinions with regard to the use of alcohol in fevers are as multitudinous as authors. With the exception of a few, who have a strong bias of prejudice, the profession come out in favor of the use of this agent. We do not yet understand the nature of pyrexia. Some pathologists question the existence of a heat center. The theory that it is due to increased tissue metamorphosis is not as universally accepted now as it was fifteen years ago Now the nervous theory is the popular one. Whatever be our theories with regard to their causation, there is no question about the injury which results from long continuance of febrile conditions. And there is as little question about the beneficial influence of alcohol in these continued fevers.

It is a fact of observation that certain agents reduce the body temperature when abnormally high. We do not know how they do this in all cases; the *modus operandi* is not the same with all. Aconite depresses the heart's action and stimulates the sudorific apparatus, and so we partly understand its action. We are not so clear in our understanding of the action of alcohol, and its effects are not so direct or so uniform. To obtain the desired effects it must be given in some cases in small doses, repeated at long intervals. In other cases it must be used frequently and freely.

In an epidemic of typhus fever in New York, thirty years ago, I remember that good results were said to have followed the use of brandy in large quantities—in one case 52 oz. every day; if this quantity were diminished, symptoms of exhaustion appeared.

I have given to a patient 38 oz. of port wine every day for two weeks, giving also three quarts of milk and raw eggs freely, and these doses were necessary. I have seen other cases where no amount of alcohol could be tolerated.

There are physicians of eminence who eschew the use of stimulants wholly; it seems to me without good ground. My own observation is that they have such a positive influence on nutrition that they are indispensable agents in the successful management of fever cases.

Dr. Maire: One point further ought to be mentioned. Dr. Cleland would not give alcohol in the early stage of fevers. An exception must be made to this rule in the case of patients who habitually use stimulants.

In the case of young children, instead of giving alcohol internally, we may obtain its beneficial effects in some degree by using alcohol baths.

Dr. Connor: It is pretty well made out that the action of alcohol on the nervous tissue is an anæsthetic one. Its first effect, the glow and exhilaration that is taken as evidence of stimulation, is due to its anæsthetic action on the vaso-motor system, and we may trace its anæsthetic effects, when given in large doses, upon tissue after tissue, until the man is dead drunk, i. e., in a condition of general anæsthesia. This seems to me to point out the "indications" for the use of alcohol as a therapeutic agent. By keeping it in mind we may use the remedy rationally, as well as empirically. There is an irritated condition of the nervous system in fevers, which interferes with its normal functions, and reacts to increase the difficulty that has caused it. Alcohol controls this irritation, and I believe that it is in this way that it accomplishes its results. It is to be classed not with nutrient remedies, but with anæsthetics like chloroform.

Dr. Bigg: I confess to having used alcohol always in the first instance with some trepidation. I have regarded it rather as antidotal than as nutritive in its action. There is present something that acts on delicate nervous organizations as a poison. Alcohol acts as an antidote to this poison.

Dr. Noyes: The use of alcohol has had its advocates and its opponents. It is now conceded that it is both a food and a medicine. Much depends on the dose and degree of dilution. Its action on tissues when concentrated is that of a strong irritant. Properly diluted it acts as a stimulant. By personal experience I know that its effects on the general system are quite different when taken in the form of wine from what they are in the more concentrated form of spirits. In the one case it increases intellectual activity, in the other its influence is benumbing. Its value in the treatment of febrile diseases has been recognized by physicians for many years.

Dr. Lyons: We are apt to forget that a remedy like alcohol may act in several different ways, having no relation to one another. Some have looked exclusively upon the action of the remedy upon the nervous system, which, without question, is of great importance. Others have considered it simply as a material capable of oxidation, and have been puzzled to understand why its influence on nutrition is so variable. It is as if one were to use anthracite coal as a fuel, trusting wholly to his knowledge of the theoretical heat-producing power of its carbon, and forgetting the necessity of providing a suitable fire-box for its combustion.

It is true that anthracite coal is capable of producing a definite amount of heat, when burned. It is equally true that the coal, injudiciously used, may put out the fire—and something very similar to this is perhaps true of alcohol. It is certain that its primary and immediate action is upon the nervous system, and that many of its beneficial effects may be explained in this way. It does not follow that it may not also serve under proper conditions as a fuel. Scientific observations seem to have proved that it *is* consumed to a certain extent in this way, and it is entirely possible that this may be the case in a febrile condition to a greater extent than in the normal condition of the system. Its effect as a food is certainly greatly overshadowed in health by its immediate action on the nervous system, and the physician may sometimes be disappointed in his expectations when he gives it in diseased conditions from this same cause. I am not assuming that in fevers alcohol does actually serve as a food, but simply urging the necessity of remembering that in its relations to a living organism such an agent as alcohol may have a double, or a three-fold, or a manifold action, and it is not well to dogmatize with regard to it, except on a basis of clinical observation.

Dr. Cleland: I am pleased that this subject has been so fully discussed; I should have been glad to have heard from other members of the Academy. Every case must be treated practically as a study. We must feel our way in the use of alcohol, as we do with many other agents. Experience teaches us to graduate the dose to the requirements of the case, and it is impossible to lay down any but general rules.—*American Lancet.*

THE REPORT OF THE COMMISSION ON HYDROPHOBIA.

The report of the Commission appointed in April, 1886, by the then President of the Local Government Board to inquire into M. Pasteur's treatment of hydrophobia was presented to Parliament on Tuesday last. It is not a lengthy document, but in a comparatively few paragraphs it affords the most complete and powerful defence of M. Pasteur's method, and the most crushing reply to his critics yet published. The Commission consisted of Sir James Paget, Sir Joseph Lister, Sir Henry Roscoe, M. P., Dr. Richard Quain, Dr. Lauder Brunton, Professor Burdon Sanderson, and Dr. George Fleming, Principal Veterinary Surgeon of the Army, with Mr. Victor Horsley, Professor Superintendent of the Brown Institution, as Secretary.

All attempts to estimate the value of M. Pasteur's method of prophylaxis against rabies necessarily involve the investigation of two propositions, which are distinct, though nearly connected; the report of the Commission, therefore, necessarily falls into sections which must be studied in their natural sequence. The great French biologist first claimed that his inoculations were capable of protecting a man or animal from the risk of becoming infected if bitten by a rabid dog; but as the success of this method became noised abroad, he was compelled to attempt to prevent by its use the development of the disease in persons already infected. The first or "protective" treatment has been amply tested, and the Committee is able to report that "it may be deemed certain that M. Pasteur has discovered a method of protection from rabies comparable with that which vaccination affords against infection from small-pox."

The main question of human interest, however, is whether the second claim put forward by M. Pasteur, namely, that he has discovered an effective "preventive" treatment capable of preventing the development of the disease in persons bitten by rabid dogs, is well grounded. Upon this all-important point the Committee has brought together an amount of evidence which will go far to settle the question, and certainly constitutes the report one of the most important documents yet contributed to the controversy.

The report is founded upon observations made by certain members of the Committee who visited M. Pasteur's laboratory and investigated a series of his cases, upon the opinions and statistics published by M. Pasteur, and upon experiments made for the Committee by the Secretary, Mr. Victor Horsley. Two rabbits inocculated by the originator of the method were brought back from Paris and kept at the Brown Institution, where, within a week, each developed the peculiar symptoms, of which the most notable is ascending paralysis, described as produced by rabies in those animals. The first step was to prove that this disease was communicable and was really rabies; four rabbits inoculated beneath the dura mater with the spinal cords of the Paris rabbits developed the same symptoms in six or seven days; four dogs similarly treated developed rabies in eight or nine days, and it is important to note that in two the disease took the furious form, while in two the paralysis was an early symptom, and the animals had the disease in the form termed "dumb" rabies. The converse experiment was also performed, and it was found that bites inflicted by dogs found in the streets suffering from furious or dumb rabies produced the paralytic rabies in rabbits; inoculation with the spinal cords of these dogs produced the same result. The only difference to be noted between the disease as produced in rabbits by M. Pasteur's virus and as produced by the virus of ordinary rabid dogs, was that, in the latter case, the period of incubation was longer (17 to 21 days), and that the symptoms also lasted longer (a week instead of three or four days). These differences were in accordance with the statements made by M. Pasteur.

The general result of the earlier experiments made by Mr. Horsley was to confirm the statement that the virus was contained in the spinal cord; that it could be transmitted without essential change by inoculation; that it was rendered more intense by transmission through rabbits; and that it might manifest itself either in the furious form commonly seen in dogs, or in the paralytic form usually observed in rabbits, or in intermediate forms, but that the disease was always the same—always true rabies.

Having thus cleared the ground and proved the correctness of M. Pasteur's preliminary observations, experiments were next made to test the claim that this virus could be so attenuated that it might be inoculated without danger to the animals, and that, when used after the prescribed manner, it afforded protection to dogs against the effects of subsequent inoculation with rabid virus. Upon this point Mr. Horsley's investigations afforded equally conclusive evidence. Emulsions of the spinal cords of rabbits which had died of rabies were injected subcutaneously into six dogs. The injections began with a cord which had been dried for fourteen days, and were repeated daily, using on each succeeding day a cord which had been dried for one day less, until at last a fresh cord was used. None of these dogs suffered from the injections. These six dogs, two unprotected dogs, and some unprotected rabbits were anæsthetized and bitten by rabid dogs or cats; the unprotected animals all died of rabies, while not one of the protected animals suffered from the disease. Mr. Horsley has thus been able to repeat the successes achieved by M. Pasteur.

In the following logical sequence of the report we have now reached the point of greatest practical interest, but where, unfortunately, the evidence becomes less direct and more inferential. The evidence afforded by comparing the mortality in persons who have, with that of those who have not, been treated by the prophylactic method, cannot be expressed in simple numerical terms, because the necessary data are not available with sufficient precision in all cases. In the first place, it is not always possible to ascertain whether the dog which inflicted the bite was really suffering from rabies; in the second place, the probability of infection varies as the bites have been inflicted through clothes or on the bare skin, with the amount of hæmorrhage which occurred at the time, the thoroughness of the local treatment, and with the condition and genus of the animal by which the bite is inflicted. Thus, taking in each case the lowest estimate, the mortality after dog-bites is 5 per cent., while that after wolf-bites is 30 per cent.

Professor Burdon Sanderson, Dr. Lauder Brunton, and Mr. Victor Horsley, who went to Paris in May, 1886, personally investigated the history of 90 patients residing in Paris, Lyons and St. Etienne, whose names appear consecutively on M. Pasteur's list. Full particulars of all these patients are given in an appendix; they appear to consist of a fair average set of cases; in 31 instances there was no reliable evidence that the dog was rabid; in others the bites were inflicted through the clothes, but in 24 the patients had been bitten on naked parts by undoubtedly rabid dogs, and the wounds were not cauterized or treated in any way likely to have prevented the action of the virus. None of these 90 persons have died of hydrophobia. The Committee estimates that 8 would have died if the inoculations had not been practiced. This is the most precious evidence obtained by the Committee, but it would be difficult to over-estimate its value, and it is well worthy the great time and pains expended in obtaining it. No previous observers or critics have contributed any evidence of the kind, and it must be held fully to confirm the claims advanced by M. Pasteur. The other statistics given me are of a kind with which we are already familiar; taking the whole series of cases inoculated from October, 1885, to December, 1886, and using the lowest mortality ever estimated for untreated cases (5 per cent.), the Committee is of opinion that, "making fair allowance for uncertainties, and for questions that cannot now be settled, we believe it sure that, excluding the deaths after bites by rabid wolves, the proportion of deaths in the 2,634 persons bitten by other animals was between 1 and 1.2 per cent., a proportion far lower than the lowest ever estimated among those not submitted to M. Pasteur's treatment, and showing, even on this lowest estimate, the saving of not less than 100 lives."

It is also stated that it has been proved, either by inoculation experiments with their spinal cords or by the occurrence of rabies in animals also bitten, that in the cases of 233 persons bitten the dogs were indubitably rabid, yet only 4 persons died; whereas the Committee estimates that at least 40 would have died if the inoculations had not been performed. Even the cases of the 48 patients bitten by rabid wolves, of which so much has been made by M. Pasteur's opponents, are made to tell in his favor, for the Committee estimates that if untreated nearly 30 would have died, whereas only 9 actually succumbed. Further, it is stated that during the first three months of this year M. Pasteur had inoculated 509 persons bitten by animals proved to have been rabid either by inoculation or by the death of animals bitten, or so certified by veterinary surgeons. Of this number only 2 have died, and one of these had been bitten by a wolf a month before the inoculations were commenced, and died after 3 days' treatment. "From the evidence of all these facts," the report continues, "we think it certain that the inoculations practiced by M. Pasteur on persons bitten by rabid animals have prevented the occurrence of hydrophobia in a large proportion of those who, if they had not been so inoculated, would have died of that disease."

The report also deals with the question, raised mainly by v. Frisch in Vienna, and Lutaud in Paris, whether the inoculations of Pasteur may not themselves be responsible for the deaths of some of his patients. The Committee is of opinion that there is no evidence that any deaths have been caused by the first or ordinary method, but that since the "intensive" method has been used deaths have occurred under conditions which have suggested that they were due to the inoculations rather than to the infection from the rabid animal. The case of the man Goffi, an attendant at the Brown Institute, who was bitten on September 4th, was placed under M. Pasteur's care on the following day, but died on October 19th from acute ascending (motor) paralysis in St. Thomas's Hospital, rather tends to confirm this fear, for Mr. Horsley has found that he died of hydrophobia. The report favors the assumption that Goffi died of the virus of the cat by which he was bitten, chiefly on the ground that the period of incubation was longer than would have followed the inoculation of virus of the highest intensity. This statement, however, appears to go near to begging the whole question, for the matter in dispute is the behavior of the "intensive virus" in man, and a most important element is the duration of incubation. The unusual nature of the symptoms also requires explanation, for the suggestion that the cases hitherto described under the term "acute ascending paralysis," or "Landry's paralysis," are in many instances of the dumb or paralytic form of rabies in man, rests upon this single observation of Mr. Horsley's, and ignore the fact that a large proportion of such cases recover. That M. Pasteur himself shares to some extent the apprehensions which have been expressed is shown by the fact that he has already modified his intensive method; instead of using a whole series of fourteen cords, from fourteen days to one day old, during the short period of seven days, followed by six other injections on the four following days, again ending with a cord only dried for one day, he now spreads the injections over fifteen days, and the most virulent cord used has been dried for five days.

The practical conclusion at which the Committee has arrived is, that until police regulations of the most stringent kind can be enforced with complete success, there will always be a considerable number of persons who will require treatment by the method of M. Pasteur. During the ten years ending 1885, the annual average of deaths from hydrophobia was 43, and this probably represents a total number of over 800 persons bitten by rabid dogs; it is not possible to say which, among this whole number, are not in danger of hydrophobia. Police regulations applied over the whole of Great Britain would very materially diminish this number, but the Committee is of opinion that to be effective, the regulations must require (1) the destruction of all wandering, ownerless dogs; (2) discouragement of the keeping of useless dogs by taxation or other means; (3) prohibiting importation of dogs from countries where rabies is prevalent, or the imposition of quarantine; (4) compulsory use of muzzles in districts where rabies is prevalent —*British Medical Journal.*

Dr. N. M. Shaffer has expressed the belief that supposed syphilitic joint disease is often in reality a tubercular disease influenced by a syphilitic heredity. He thinks that syphilitic joint disease, *per se,* is very rare in childhood, and that the great majority of cases were tubercular. Mercury bichloride, persistently administered for a long time, he says, is about as efficient in the tubercular as in the so-called syphilitic disease.—*New York Medical Journal.*

SEPSIS AND ANTISEPSIS IN SUMMER DIARRHŒA.

By Silas Allen Potter, A.M., M.D., Roxbury, Mass.

Writers upon summer diarrhœa appear to be agreed that fermentation holds an intimate relation to the disease. Dr. H. C. Haven says: "It will, I think, be universally admitted that, in its totality, summer diarrhœa of infants is a zymotic or fermentative disease." Maximilian Herz states, in regard to cholera infantum: "It is pretty generally admitted that putrefaction of food, as Baginsky maintains, is an important cause of cholera infantum." J. Lewis Smith writes, of infantile diarrhœa of summer: "Undoubtedly one of the most important causes is to be found in the very free exhalations arising from decomposing animal and vegetable matter during the heated term, and the disease is always most frequently met with in those localities where the accumulation of filth is the greatest."

It is the object of this paper to collect the more important facts about fermentation, and consider their relation to the disease in question.

The terms sepsis and antisepsis we wish to employ in a broad sense, to indicate, on the one hand, injurious effects resulting from micro-organisms; on the other, influences adverse to the life or activity of micro-organisms.

The alcoholic fermentation is produced chiefly by the yeast fungus, torula cerevisiæ; the lactic-acid fermentation, chiefly by the bacillus lactis; the butyric-acid fermentation, chiefly by the bacillus butyricus. Of these three processes it may be affirmed that the principal organism concerned in their production has been determined. This certainty has been reached by the isolation of the organism, the introduction of a pure cultivation into an appropriate sterilized medium, and the obtaining of the proper chemical decomposition.

Other fermentations, such as the acetic, ammoniacal, viscous, putrid, have not been studied with the accuracy which the later methods of research permit. Though due to bacterial action, it is impossible to designate a particular organism as their sole or chief cause. The micrococci found in putrefying material are yet undifferentiated, and the bacterium termo, believed by Cohn to be the essential cause of putrefaction, has already been proved to be a name covering more than a single variety of organism. It is not improbable that the same may be shown to be the case with the micrococcus ureæ, micrococcus aceti, and others.

However, it is not so much with the particular organism producing these various changes that we are now concerned, as with the grand fact that the cause of fermentation and putrefaction is vital. "Micro-organisms," writes Carl Fraenkel, "are the producers of fermentation, and, what in the economy of nature is a still more important part to play, are the cause, and the only cause, of the putrefaction of organic substances."

When it was proved that it was the exclusion of bacteria from a wound that averted the traumatic infective diseases, a scientific basis was at once given to antiseptic surgery. If we believe that summer diarrhœa in a vast number of instances would not occur but for fermentation, then a recognition of the cause of fermentation is the initial step in our understanding of the disease.

It is not claimed that, in defining the chief morbid process, the ultimate cause of the disease has been demonstrated. It is well known that bacteria are constantly present in the digestive tract in health. It is even possible that they are useful there. Before reaching the ultimate cause the question must still be answered, why these organisms, at one time subject to the control of the body, become at another productive of disease?

The action of fermentative organisms in causing diarrhœa is probably indirect, the more immediate agent being substances produced by the microbes through the decomposition of the fluids in and upon which they live.

According to Fligge, the chief products of bacterial action are: Gases, as CO_2, H, CH_4, HS_2, NH_3; water; sulphur; volatile bodies, as trimethylamin, alcohol, formic acid, acetic acid, butyric acid; fixed acids, as lactic, malic, succinic, oxalic, tartaric; sulpho-acids, as taurin, amides of the fatty acids, especially leucin, alansin; bodies of the aromatic series, as tyrosin, phenol, cresol; reduction-products, as indol, hydroparacumaric acid; complex molecules, as carbohydrates, pepton, hydrolytic ferments; coloring matters and poisonous alkaloids.

Of these substances two classes, some members of which at least are produced by the bacteria of fermentation, are interesting in the study of diarrhœa—the acids and the poisonous alkaloids.

Acids can excite diarrhœa by immediate irritation of the mucous membrane of the bowel; the alkaloids indirectly, by a systemic effect. The simpler, less violent cases of diarrhœa can often be traced to the irritation of undigested food and the acid substances produced in its fermentation; the more sudden and violent cases seem often to call for the agency of a poison.

It was long ago noticed that serious illness oftentimes followed the eating of decomposing meat, fish, or cheese.

Kerner was the first to suspect that alkaloids were formed by the decomposition of albumen, and in 1820 called attention to the similarity between the poisoning by sausages and atropia.

Panum, in 1856, demonstrated that putrefying substances often contained poisons which, when injected into animals, caused death. That death was not due to the activity of bacteria in the body, he showed by sterilizing the fluid before injection. He also proved that the inflammatory changes in the intestinal mucous membrane of animals poisoned with putrid material was not caused by the bacteria in the putrid fluid, but by chemical substances which retained their character even after boiling.

Selmi, of Bologna, gave to these alkaloids formed by the decomposition of proteids the name of ptomaines.

Necki, in 1876, first obtained ptomaines in a pure form and determined their chemical symbols.

Brieger, however, in 1885, produced the most important results which have been obtained in this branch of investigation. From putrefying meat Brieger isolated three alkaloids which he called neuridin ($C_5H_{14}N_2$), neurin ($C_5H_{13}NO$), and cholin ($C_5H_{15}NO_2$). From putrefying fish he obtained muscarin ($C_5H_{15}NO_3$), gadanin ($C_7H_{17}NO_2$), and a base allied to ethylin-diamin ($C_2H_4(NH_2)_2H_3O$). From decomposing gelatine he separated neuridin, muscarin and dimethylamin. Of these, neuridin is most constantly present in commencing putrefaction. The existence of the others seemed to depend, in some degree, upon the kind of material undergoing decomposition. From putrefying human bodies Brieger obtained several substances of alkaloidal character—neurin, cholin, cadaverin ($C_5H_{16}N_2$), putrescin ($C_4H_{12}N_2$), saprin ($C_5H_{16}N_2$), trimethylamin ($(CH_3)_3N$), dimethylamin, triethylamin, mydelain and a substance of undetermined composition.

The physiological action of these various compounds differs widely. Some, as neuridin, cadaverin, putrescin and saprin are either harmless or must be injected in very large dose to produce toxic symptoms; others are violent poisons. Of the latter, there are five which bear an important relation to the study of diarrhœa—neurin, muscarin, cholin, mydelain and the substance whose composition was not determined. The action of the first three is essentially identical, the most important symptoms produced by a fatal dose being salivation, vomiting and diarrhœa, dyspnœa, paralysis and death. Mydelain, when injected into guinea-pigs, even in the very minute quantity of three-fortieths of a grain, causes profuse secretion from the eyes, nose, mouth and intestine, dilated pupils, exophthalmos, an increase of temperature, paralysis, fibrillary twitching of muscles, dyspnœa and death. In cats the symptoms did not essentially differ, diarrhœa being prominent as before. The substance of undetermined composition, when injected into rabbits and guinea-pigs, caused excessive peristalsis and exhausting diarrhœa. In general, it may be said that most of the alkaloids which have been obtained by the decomposition of albumen have a tendency to produce diarrhœa.

It does not follow, because ptomaines capable of exciting diarrhœa are formed outside the living human body, that they are formed likewise within. There are, however, strong reasons for believing that such may be the case.

Substances capable of putrefaction exist in the digestive canal. Of such the most common in children is milk, but no article of food can be assumed to be absent in either adults or children. In many cases, besides food, there will be mucus, serous exudation from inflammatory surfaces, blood, pus or sloughs.

The micro-organisms which accompany putrefaction, and are believed to be its cause, are present in the digestive tract. Johnston, in the examination of the vomitus of seventeen breast-fed infants affected with summer diarrhœa, found invariably micrococci and what is known as the bacterium termo. In diarrhœal fæces he discovered innumerable bacteria, especially of the varieties mentioned. Since bacteria exist in the digestive tract in health, it must be supposed that while digestion is being normally performed the conditions are unfavorable to the multiplication of organisms. Spallanzani found that when substances in which putrefaction had begun were introduced into the living stomach the process was checked. We may suppose that, in order to initiate fermentative changes, organisms enter the body in uncontrollable numbers, or that the digestive function is in whole or in part suspended.

The products of fermentation are found. With the sour vomitus and the acrid or foul stools of summer diarrhœa all are familiar. The search for alkaloids in diarrhœal excrement has probably not been made; but such have been found in healthy fæces, and that freshly voided fæces are poisonous has been proved by Bouchard. It is probable that the amount of poisonous alkaloids formed in disease is greater than in health, and also that their amount and the conditions under which they are produced render them less subject to the eliminative action of the body.

What is known of ptomaines throws light upon certain obscure conditions arising in summer diarrhœa. There are cases of cholera-infantum in which violent symptoms are followed by a speedy death, and yet no appearances adequate to explain the result are revealed by the autopsy. There are also cases of diarrhœa, some acute, others subacute, which a few hours before death show, with the condition called hydrencephaloid, a rise of temperature. The nervous symptoms may be referred to exhaustion. It is difficult, however, to explain the increase of temperature by either exhaustion or a fresh inflammatory process begun in those last few hours of life. It seems more reasonable to believe that in both this case and the former a septicæmia has been induced by the products of putrefaction, either absorbed from the digestive canal or generated in the exhausted tissues of the body.

It is easily remarked that in no case of summer diarrhœa do the symptoms correspond completely with those following the administration of a given ptomaine to an animal. Of this an explanation is offered by the fact that it is impossible for a single ptomaine to exist alone in the digestive canal, since both the albuminoids and organisms present are various. Moreover, different ptomaines, though they may have similar, may possess antagonistic powers, so that the effect of any one may be modified or even neutralized. It is therefore impossible to predict with exactness, from experiments outside the human body, what the action of the alkaloids of putrefaction will be when formed within the human body.

Many of the expedients which have been found useful in the treatment of summer diarrhœa possess some element unfavorable to the growth of micro-organisms.

The removal of a child from the city to the country or seashore is, in high degree, an antiseptic measure. Investigation into the bacterial contents of the air and earth show that micro-organisms diminish in number as we rise from the surface of the earth, as we penetrate beneath it, and as we go out upon the sea. They are absent in the high Alps, absent or very scarce in the lower strata of the soil, and absent, so far as investigation has gone, in the sea air a thousand miles from land. In the Rue de Rivoli, on the contrary, in the centre of Paris, there are ten times as many microbes in the air as at the fortifications without the city, and at Montsouris Observatory the north winds blowing over Paris bring many more microbes than the south winds from the country. The most impure come from the hills of Villette and Belleville, populous quarters in which also are cemeteries and slaughter-houses. In other words, where there is decomposing organic material there are bacteria, and the greater the amount of the one the larger the number of the other. What is true of air is true in a higher degree of water. Condensed aqueous vapor has been found to contain 900 bacteria to the litre; sewer-water from Clichy, eighty millions. It is where human beings are crowded together in large numbers that the greatest consumption and excretion of organic matter takes place. It is here, therefore, that the widest necessity exists for those retrograde processes which it is the peculiar province of fermentative organisms to affect. We are justified, therefore, in looking upon filth and sewage as the grand culture medium of fermentative organisms, the special soil in which flourishes the cause of summer diarrhœa. Removal from this contaminated environment would therefore be demanded by theory and is approved by practice. It is readily seen, however, that the advantage which the country naturally possesses over the city can be nullified for any particular place by unhygienic local conditions. The insufficient drainage of a country town, the cess-pool under the window of an isolated farm-house, create the same danger which is encountered in the midst of dense population. It is, in all cases, the proximity of decomposing organic material which is to be avoided, its absence which is to be desired.

The transferrence of a child from the bottle to the breast is an antiseptic measure. Milk as it comes from the breast is free from organisms, and human milk, even when allowed to stand exposed to the air, will, according to Baginsky, resist fermentation a number of hours longer than cow's milk.

The heating or boiling of milk is an antiseptic procedure. The ancients used to quench flints in milk to render it more serviceable in the treatment of diarrhœa. Household observation has taught that boiled milk keeps. The more exact studies of the laboratory have shown that an exposure to the temperature of boiling water for a few seconds in a moist medium will kill all bacteria, while a continuance of this temperature, under the same condition, for fifteen to thirty minutes, will destroy their spores. A fermentescible fluid, thus sterilized, will remain unchanged until bacteria are once again admitted. To completely sterilize milk is hardly compatible with the conditions of a nursery. An approach to this can, however, be effected by boiling milk in the same bottle from which it is to be afterward nursed. The bottle should be stopped with cotton before boiling, and the stopper removed only when the milk is required for use. Experiment has shown that milk thus prepared will keep sweet in a warm room for twenty-four hours, while unboiled milk, standing in a pitcher by its side, will in that time have become sour and coagulated. To thus defer for a few hours the capability of milk to ferment may be all that is required in the treatment of some of the minor cases of vomiting and diarrhœa in infants.

All means for emptying the digestive tract, either by withholding food or by giving evacuants, have an antiseptic value. On the other hand, micro-organisms are deprived of the material necessary for their growth; on the other, both organisms and their products are swept away. Evacuants have from a remote period been held in favor in the treatment of diarrhœa. The Greek physicians used mild laxatives to remove the "peccant humors" from the system, and Piso, who introduced the use of ipecac for its emetic and cathartic effect in the fluxes, described it, in his extravagant language, as "a sacred anchor and most exquisite gift of nature."

Various drugs have been used to produce disinfection of the digestive tract. Of these, the most powerful is corrosive sublimate, and they range in strength from this down to borax or salicylate of sodium. To determine the comparative value of these in the treatment of summer diarrhœa does not at present seem possible. It would appear that the value of a particular drug does not depend upon the precise grade of its antiseptic power. A milder antiseptic may, all things considered, be more valuable than a stronger one. Nor does it seem probable that absolute antisepsis of the digestive tract is either possible or necessary. The fact that the processes of digestion in health are conducted in the presence of bacteria leads us to think that nature controls the micro-organisms. It is probable that she can do something for herself in most cases of disease. The part of medicine is so to modify unfavorable conditions as to restore to nature the control which she had previously lost.

The main positions advocated in this study of summer diarrhœa are:

1. That micro-organisms bear an important causal relation to a large proportion of cases of summer diarrhœa.
2. That antisepsis of the digestive tract is an essential element in the treatment of the disease.
3. That in antisepsis must be included not only the use of drugs, but also the establishment of all conditions known to be unfavorable to the life and activity of micro-organisms.
4. That, in order to a more scientific use of antisepsis, we require more adequate information as to what organisms are concerned in the production of fermentation, their life-history, and the conditions favorable and unfavorable to their growth.—*Medical Record.*

PRECOCIOUS GUMMATA.

The close and widespread study of syphilis within the past fifteen years has conclusively shown that the old and dogmatic division of the disease into three sharply marked periods must soon be very much modified, or perhaps even discarded, and that, although the terms primary, secondary and tertiary, as applied to stages of syphilis, present the advantage of clearness and simplicity in study and description, and may even be clinically true as regards a large number of cases, yet there are very many in which such a division is inappropriate, since we observe in some the so-called tertiary lesions in the secondary period; in others seemingly secondary lesions in the tertiary period, and perhaps coexisting with well-marked lesions of that period; or, again, cases of tertiary lesions concomitant with secondary lesions. To hold, then, that superficial lesions belong to, and are only found in, the early or secondary period, and that they are followed later on by lesions involving the tissues more profoundly, is in reality to sacrifice facts for simplicity of description.

Though there exist comprehensive descriptions of precocious nervous, osseous, articular, ocular and superficial ulcerative dermal affections due to syphilis, a systematic description of the clinical history of precocious gummata is wanting. In the *American Journal of the Medical Sciences* for July, Dr. Robert W. Taylor presents the clinical histories of a selected number of his cases, from which he traces a clear and satisfactory description of these not common nor yet infrequent eruptions. His studies convince him that there are three forms of the precocious gummata: The first, the generalized form; the second, the localized form; and the third, the neurotic form, which in some of its features resembles erythema nodosum. Of each of these three forms, moreover, there are two varieties: a resolutive, or non-ulcerative, and an ulcerative variety.

The clinical history of the generalized form of precocious syphilide is as follows: As early as the eighth week of infection the patient notices either small circumscribed swellings under the skin, generally unattended with pain, and only perceptible to the touch, or this stage may escape him, and his attention is at first arrested by a number of bright red spots. These gummata are found to be round tumors of the size of a bean, deeply set in the skin, having a bright red color, which at the first is dissipated by pressure, but becoming deeper, more sombre and permanent in color later on. They increase peripherally quite rapidly, so that within a week or ten days they may attain an area of an inch or an inch and a half. In general a goodly number of tumors appear scattered symmetrically over the whole body. As they grow they are followed by new ones which come along with greater or less rapidity, in proportion as internal medication is pushed. If appropriate treatment be instituted, the first crop may be the only one. Unaffected by medicine their evolution continues, and in a fortnight the arms, forearms, perhaps the scapular region, not infrequently the back and anterior surface of the trunk, the gluteal regions, thighs and legs are invaded by these tumors.

The course of these gummata is, in general, quite regular and not subject to great variation. When developed they present a quite firm sensation, and this may be termed the period of condensation. As they grow older the red color becomes rather coppery, and while the periphery of the tumor may or may not seem firm, the central portions appear softer to the touch, conveying the impression that the tissues are permeated with a thick fluid. This we may denominate the stage of softening. In the majority of the cases there is not abscess formation, but rather a liquefaction of the gummy infiltration, which is, in general, promptly absorbed. The time occupied in the full development of these tumors is usually from ten days to two weeks, and after that their period of duration is variable.

In the ulcerative variety, the stage of condensation is very short, and softening in a marked degree is observed in a few days. The centre of the tumors assumes a dark red color in one or in several spots, and a sensation of fluid under the epidermis is distinctly made out. Then slight ulceration may occur in spots, often at the openings of the hair and sebaceous follicles, and very soon the epidermal roof of the tumor melts away, and we soon see the gummatous ulcer, with its slightly thickened, reddened, undermined, and perhaps everted edges, and its floor of a greenish-red, bathed in an unhealthy sanious pus.

In the localized form, the clinical history is similar to that preceding. The clinical history of the neurotic form has an individuality of its own. In the very early months of the diathesis, either in the stationary period of an early syphilide or at its decline, generally preceded or accompanied by severe neuralgic symptoms involving any cutaneous nerve, by severe cephalalgia, continuous or nocturnal; by rheumatoid pains in muscles or joints, and by general malaise and debility, this eruption makes its appearance with more or less promptitude and develops quite rapidly. In some instances the invasion is very acute, so that at the end of a week we may find fully developed tumors an inch or two long, in others and in the majority of instances the development is slower, and nearly two weeks elapse. Besides the general neuralgic symptoms, local pains on the site of the lesions or in the whole territory on which they are developed are experienced. These may be continuous or intermittent, and in some cases are as excruciating as in severe herpes zoster.

The eruption consists of two orders of lesions; first, tumors or nodosities seated in the subcutaneous tissue, and freely movable under the skin and over the fasciæ, though as they increase they may contract adhesions on both surfaces; second, oval or round tumors, or irregular plaques from fusion of tumors. The appearance and cause of the tumors are fully described.

In all cases of precocious gummata the use of iodide of potassium is indicated, either combined with a mercurial or with the use of inunctions of mercurial ointment.—*Amer. Jour. Med. Sciences.*

THE DIAGNOSTIC VALUE OF EPISTAXIS.

Nosebleed occurs with greatest frequency in childhood, from the age of six or seven years up to puberty, and after that time becomes more rare. Boys seem to be affected more often than girls, a fact for which no satisfactory explanation has been offered, unless, perhaps, greater exposure to traumatism can be invoked. After puberty, however, the periodical loss of blood at the catamenia may secure a certain immunity in the case of women. Epistaxis occurring in childhood is more frequently idiopathic, while in adult life and old age it is usually symptomatic of some abnormal condition, leaving out of consideration traumatism, although even this is more efficient as a cause in childhood than it is in later life.

Since nosebleed is so often, in adults, only a symptom of some other condition, it not infrequently possesses considerable diagnostic and prognostic value, and we propose to consider, briefly, the phenomenon in its semeiological relation to various diseases, reserving for another occasion the discussion of its value in prognosis.

Obstinate and long-continued hemorrhage from the nose, coming on after a fall or a severe blow on the head, points, with considerable definiteness, to fracture of the base of the skull, involving the wall of the superior nasal fossæ. This diagnosis is rendered almost absolutely certain if the fluid escaping from the nostrils becomes watery and light-colored, from gradual admixture with cerebrospinal fluid. The mistake must not be made, however, of jumping to a conclusion that a fracture exists, simply because epistaxis is present, for hemorrhage may be induced by the concussion, while the bones at the base of the skull remain intact. The bleeding in such a case is usually neither profuse nor of long duration.

Repeated attacks of nosebleed without apparent cause, especially if obstinate hemorrhages from other parts arise on slight provocation, would suggest the possibility of hœmatophilia, and should lead the physician to inquire carefully into the family history of the patient, and more particularly into that of the male members of the family on the maternal side. Frequent hemorrhages may, however, be due to the presence of a small ulcer in the nasal mucous membrane, and the precaution of examining the nares in such cases should never be omitted.

The occurrence of epistaxis is often a sign of considerable diagnostic importance in typhoid fever. In measles, also, it is not uncommon at the beginning of the disease, while it occurs but seldom in scarlet fever and in rubella. It is common in anæmia and chlorosis, in malaria and in various cachexiæ. Nosebleed may also point to disease of the vascular system. Abnormal thinness of the walls of the capillaries, atheroma, and the changes due to syphilis or alcoholism are the principal alterations observed.

At the meeting of the Academy of Medicine of Paris, held on April 26th, M. Verneuil read an interesting communication on the influence which certain diseases of the liver may have in the production of epistaxis, in which he claimed that nosebleed was often an indication of hepatic disorder, supporting his assertions by a recital of the curative effects of blisters applied to the right hypochondrium. This is not a new observation, for Galen speaks of the value of cupping over the hepatic region in arresting nosebleed, but it is a point that is not insisted upon as much as it perhaps deserves. Martineau, in his article on epistaxis, in Jaccoud's "Dictionnaire de Médecine," regards the occurrence of nosebleed as a symptom of great value in cases of doubtful hepatic disorder, and he agrees with Monneret that epistaxis always occurs at some period during the course of the disease of the liver, of whatever sort it may be. This is, perhaps, rather too sweeping an assertion; but, nevertheless, intercurrent attacks of hemorrhage from the nose are of remarkable frequency in diseases of the liver, and should be taken into account in the diagnosis of obscure cases. We may say, therefore, that, if ascites be present and its cause be not apparent, the supervention of attacks of nosebleed would lend very strong probability to the assumption that the serous effusion was due to obstructed portal circulation from liver disease. In cases of epistaxis occurring as a consequence of obstruction in visceral disease, the blood is not infrequently of a venous hue. This may also be of some service from a diagnostic point of view.—*Medical Record.*

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN WILMINGTON, N. C.

Thomas F. Wood, M. D., Wilmington, N. C., }
Geo. Gillett Thomas, M. D., “ } Editors.

☞ *Original communications are solicited from all parts of the country, and especially from the medical profession of* The Carolinas. *Articles requiring illustrations can be promptly supplied by previous arrangement with the Editors. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to the* Journal, *by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to* Thomas F. Wood, M. D., *P. O. Drawer* 791, *Wilmington, N. C.*

THE MEDICAL EXAMINERS' LAW.

Frequent inquiries have reached us, directly and indirectly, concerning the construction of the laws regulating the practice of medicine in North Carolina since the passage of the amendment of 1885, and there is some confusion in regard to the status of physicians in practice in the State. Previous to 1859 no barrier existed to the assumption of the responsibilities of the practice of medicine, and any one who felt disposed to offer his services as a physician could do so, and no question was made as to his right or qualifications. The members of the State Medical Society, comprising many, if not all, of the leading physicians in the Commonwealth, saw the injury that was resulting to the good name of the profession and to the safety of the public in this unregulated state of affairs. At their instance, the Legislature of 1859 passed a law which provided that no one "should practice medicine or surgery, nor any of the branches thereof, nor in any case prescribe for the cure of disease for fee or reward," unless licensed by the Board of Examiners, for the appointment of which the law made due provision. Of course all practitioners of medicine of that date were exempted from the action of this law, and these men constitute what we shall designate as class A—that is, they were entitled to all of the fees they could collect and to the privileges of physicians, whether they were in possession of a diploma or not. The law of 1859 provided that any physician offering his professional services to the public after the passage of the act, and without first obtaining a license from the Board of Examiners, should not be enabled to collect by law such fees as he should charge for his services, but his failure to obtain the license by special provision, was not a misdemeanor. These then constituted class B—men who were not liable to indictment for a breach of the laws of the State, but were disabled in the attempt by civil action to collect any monies due them for services rendered.

This state of affairs lasted until 1885, when the proviso protecting all persons beginning the practice of medicine without license from liability to criminal indictment was repealed, and the law was amended to read as follows:

"Sec. 3132. Practicing Without License. 1858–'9, c. 258, s. 15:

"Any person who shall practice medicine or surgery without having first applied for and obtained license from the said Board of Examiners, shall not be entitled to sue for or recover before any court any medical bill for services rendered in the practice of medicine or surgery, or any of the branches thereof. And any person who shall begin the practice of medicine or surgery in this State for fee or reward, after the passage of this Act, without first having obtained license from said Board of Examiners, shall not only not be entitled to sue for or recover before any court any medical bill for services rendered in the practice of medicine or surgery, or any of the branches thereof, but shall also be guilty of a misdemeanor, and upon conviction thereof shall be fined not less than twenty-five dollars nor more than one hundred dollars, or imprisoned, at the discretion of the court, for each and every offence; *Provided*, that this Act shall not be construed to apply to women who pursue the avocation of a midwife ; *And provided further*, that this Act shall not apply to regularly licensed physicians or surgeons resident in a neighboring State.

"*Provided*, that this section shall not apply to physicians who have a diploma from a regular medical college prior to January the first, one thousand eight hundred and eighty." [See Acts of 1885, chapters 117 and 261.]

This changed the status of class B in this much, that it relieved of the disability to collect fees by law all of those physicians who had begun the practice after 1859 and prior to January the first, 1880, and placed them on the same footing as the members of class A, except that those included in class B must have had a diploma from a regular medical college, bearing date before the beginning of the year 1880. These, then, constitute class B. Class C will comprise the practitioners without license, beginning the practice after the above-mentioned date and before the passage of the amended act of 1885, and these persons are unable to collect bills by law, though they are not liable to indictment.

Class D is composed of such persons as have begun the practice since February, 1885, and without a license from the Board the possession of a diploma from a regular medical college will not cure the liability of the person to indictment for misdemeanor, and upon conviction, the infliction of the fine and imprisonment as provided in the statute.

To sum up, then, we think the following is a full statement of the status of the physicians in North Carolina :

Class A.—Physicians actively engaged in professional work before 1859, can collect fees by law, and are not liable to indictment, whether in possession of a diploma or license or not.

Class B.—Physicians in active practice before January the first, 1880, if in possession of a diploma from a regular medical college, can collect fees by law and are not liable to indictment.

Class C.—Physicians entering the profession after January the first, 1880, and practising without a license from the Board of Examiners, cannot collect fees by law, but are not liable to criminal indictment.

Class D —Physicians beginning the practice of medicine (and this is meant in these classifications to include surgery and its branches and those of medicine) after February, 1885, unless authorized by the license of the Board of Examiners, cannot collect fees by law, and are liable to indictment for misdemeanor, and upon conviction, to the punishment provided for the violation of the law.

It is the interest and duty, it appears to us, of all good men in the profession to give this law their full support and countenance; for it protects them from the competition of quacks and persons unqualified to practice medicine, and stands a guardian to the lives and well-being of the people at large to ward off the dangers that must attend the attempts of ignorant pretenders to cure disease or administer to the injured. There is lacking in this law some provision which shall make it the duty of the legal officials to see that the law is complied with, and infractions upon it punished, and due provision should be made for this at a future day.

So far as eligibility to seats in County Boards of Health is concerned, we think, according to the law creating the general and auxiliary boards, only those physicians are entitled to membership in these bodies who come in classes A and B. In class C all physicians practising without license are ineligible, and of course those of class D, who are barred by the statute from practice until licensed by the Board of Examiners, are *ipso facto* barred from seats in these health organizations.

SYPHILIS FROM A CIGARETTE.

We have had an opportunity of seeing a case of syphilis now in the secondary stage, which, to all appearance, was contracted from a cigarette. The patient, a healthy man, in some way blistered his lip while smoking a cigarette, and in this spot a small sore located itself, which rapidly healed under treatment, but left behind extensive and marked specific induration. The man had been under the care of an irregular physician, who treated him for blood-poisoning, without indicating its venereal character, and the treatment had been entirely local. When he came under our observation there was a characteristic rash on his body and lower limbs, and the lip was swollen—painful and somewhat inflamed, and there was involvement of the cervical and sublingual glands. He is now suffering with syphilitic glossitis, and has slight falling of the hair. The rash has disappeared under mercurials. There has been no indication of infection about the genitals, and the date of last exposure before the outbreak of symptoms adds to the certainty of the opinion that the poison was introduced from the cigarette through the excoriated spot on the lip. The case is possessed of interest on this account, and bears a lesson with it that is apparent.

THE AMERICAN JOURNAL OF SYPHILOGRAPHY AND DERMATOLOGY.

We acknowledge with pleasure the addition of the above journal, in five volumes, substantially bound, as a gift from the accomplished editor, Dr. M. H. Henry, of New York. This valuable quarterly was begun in 1870, and concluded in 1874. A postscript to the last volume, in the handwriting of the editor, is: "This is the last page of '*The Journal.*' It terminates five years devotion—hard work, no compensation beyond the good accomplished in securing attention to, and a study of, the diseases of the skin." This work truly did a good service in inspiring new zeal in the study of dermatology, going a great ways in laying the foundations upon which the American school of dermatology is now building so successfully.

These volumes contain many valuable papers which are worthy of record, and as a part of our reference library we shall esteem it highly.

The accomplished editor is not alone in his experience in giving "hard work without compensation" to the profession, and the editors of by far the majority of medical journals in this country have experience similar to this, and by such sacrifices the science and art of medicine in this country have been advanced to an honorable position, and it must be no little gratification to realize that one has taken an active part in such honorable employment. Our esteemed friend must in this see his reward, and rest assured of the thorough appreciation of his contemporaries.

We offer to our readers an interesting and instructive letter from Dr. W. B. Pritchard, now of New York, but lately of this State. The Doctor's position in the profession in North Carolina was one he has reason to be proud of, and he has carried with him to his new field of labor the good wishes and bright expectations, on the part of his many friends, of a useful and honored career.

◆

Surgical Interference in Cancer.—The learned editor of the New York *Medical Record* concludes a very able paper in reference to surgical interference in cancer as follows: (1) Cancer is essentially a local disease, and can be cured by operation in spite of recurrence. (2) Operation, when it does not cure, prolongs life and diminishes the total amount of suffering. (3) Operations should be repeated as often as there is any chance of removing recurrent growths. (4) The disease, when it recurs, is generally of a milder type than that of the original growth, less painful and less exhausting. (6) Antiseptic surgery makes more radical operations possible, with better results than formerly obtained.—*American Practitioner and News.*

Anæsthetics During Parturition.—Dr. Fordyce Barker says that "during the past thirty-seven years I have rarely attended a woman in confinement without the use of chloroform, never where she has suffered considerable pain. Having thus used it in several thousand cases, I unhesitatingly assert that in not a single case have I ever found cause to regret its use.—*Boston Medical and Surgical Journal.*"

Pains of Menstruation.—For the relief of the violent pains that in some women precede the menstrual flow, Dr. Meniére, of Paris, gives a warm water enema containing 30 grs. of chloral and 30 grs. of bromide of potassium. For young women one-half of the above quantities should be prescribed.—*Amer. Prac. and News.*

A writer in an exchange says that in experiences in Colorado and Utah he never saw an Indian with a cold. He concludes that it is our hot rooms that give us colds.—*American Practitioner and News.*

REVIEWS AND BOOK NOTICES.

THE ALIENIST AND NEUROLOGIST FOR JULY.

We have desired to notice the work contained in this excellent quarterly more frequently, and now call attention to the July number.

The opening article is "Notes on the Pathology of Idiocy," by A. W. Wilmarth, M.D. This is a second paper on the subject by the same author. Among other interesting things, he finds the average weight of the brain of 27 idiots examined 37.5 ounces. The average weight of the cerebrum 32, the cerebellum 4.65 ounces. Counting only those known to be congenital, the weight of the brain was only 33 ounces. The weight of the cerebellum is to that of the cerebrum as 1 : 6 13-15, or, if we count only congenital, we find the ratio to be 1 : 6, instead of 1 : 8 1-7 to 1 : 8 4-7 assumed by Sharpey to be the normal ratio of cerebellum to cerebrum.

The second paper is a continuation of the lectures of Professor Bianchi on the "Origin of Language."

The editor, Dr. C. H. Hughes, contributes an article on "The Scientific Rationale of Electrotherapy." It is an honest and scientific endeavor to place before the reader the practical employment of electricity as a therapeutic agent. He considers his subject under the following heads: Chemical and Physical Changes in the System, Induced by Dynamic Electricity; Effects on Nerves and Fluids; Chemical Effects—Electrolysis; Its Power to Coagulate Blood; Galvano-Cautery; Action on the Nervous System.

We pass over the next few articles—"A Case of Intermittent Epileptic Aphasia," "Genius not a Neurosis," "Inter-communications of Delusions by the Insane," and "Observations on Reflex Nervous Disturbances," etc., to consider the article (2d of series) on "The Relation of the Nervous System to Hæmophilia, Malarial Hæmaturia," etc., by Dr. C. H. Hughes.

"Whatever other pathological co-existences may be found, neuropathic or otherwise, in any case, I believe the essential pathology of this disease is in defective central action on the part of the vasomotor center, a view which Oliver accepts only in part. A defective blood condition as to its fibrinous constituents and coagulability may precede or follow hæmophilia; but this is certainly not an invariable, or even a common, causative condition.

What is true of hæmorrhaphilia is true, in part at least, and in the chief part, we think, of hæmorrhagic malarial fever, of purpura hæmorrhagica and certain erythemas, the two latter, according to E. Wagner, being closely related.

In simple purpura and urticaria hæmorrhage takes place in the skin only. In malarial hæmaturia the sanguineous exudate is chiefly into the stroma of the kidneys, the malpighian tufts and the tubuli uriniferi; but wherever it is, though the more remote cause may be malarial toxæmia, the immediate is in the lost vaso-motor control that allows arterial dilatations and permits of the fatal pressure of passive congestion and sanguinuric excretion.

Dr. W. Allen Jameison, lecturer on diseases of the skin in the Edinburgh School of Medicine, in a review discussion of purpura and erythema, in the *Edinburgh Medical Journal* for March, expresses the common feeling on this subject when he asks: Why in certain cases of tubercular erythema hæmorrhage occurs so constantly, so quickly and so severely? and answers that it cannot be answered by the youth of the patients, nor from their anæmic conditions; and concludes that some hitherto unknown cause exists, as in hæmorrhagic small-pox. That hitherto unexplained cause is the paralysis of vaso-motor control.

A thoughtful and observant writer in the *Texas Courier-Record of Medicine*, Dr. James A. Abney, of Tufkin, Texas, writing on malarial hæmaturia, strikes the true pathology in his second proposition, that, following the preëxisting toxæmia, "the resulting pathological condition is one of vaso-motor depression, with consequent vascular expansion."

A survey of other fields of clinical observation, for which we have here neither time nor space, serves to confirm the conviction enunciated by us years ago, that the neural pathology is destined to reign preëminent in medical thought."

The article on the rare affection (bi-lateral) Athetosis, by Dr. Hughes, is illustrated, and is a valuable contribution to this much discussed ailment.

The editorial department and the selections are conducted with ability. Although this journal treats of a class of diseases not as interesting as some other departments of medicine, we commend it to all such readers, in the belief that a careful perusal of its pages will excite an interest and instruct in diseases which the general practitioner may not like, but which he certainly cannot avoid if he does his whole duty.

ON THE PATHOLOGY AND TREATMENT OF GONORRHŒA AND SPERMATORRHŒA. By J. L. MILTON, M.D., Senior Surgeon to St. John's Hospital for Diseases of the Skin, London. Octavo, 484 pages. Illustrated. Price, bound in extra muslin, $4.00. New York: William Wood & Co.

The author is already well known for his treatise on Gonorrhœa, and his reputation is that of a thoroughly candid teacher, who speaks his mind and from fullness of experience. Much of the wavering faith of the profession upon the treatment of gonorrhœa would be fortified and established upon a rational foundation if its study was approached with the philosophic spirit which the author displays.

After reviewing the variety of the subjects used for injections, he says: "We hear a great deal about medicine being an inductive science, but in so far as the therapeutics of gonorrhœa are concerned, the state of matters which has just been laid before the reader is, in some particulars, much more on a level with fortune-telling, or the prophecies in Moore's Almanack, than with science in the proper sense of the word. The reader may think this going too far; perhaps it is, but the real authors of this confusion, the medical men who ushered in so many useless things into public notice on insufficient grounds, first of all, went a good deal too far in the opposite direction; and to recommend, in a disease like gonorrhœa, which will often disappear under a few cold-water injections, a remedy on the strength of its having been successful in some few cases, as has been repeatedly done, looks to me quite as haphazard as palmistry or weather wisdom."

We recommend this as a book which has the merit of striving to clear up old errors, which are numerous, and to substitute treatment in gonorrhœa and in spermatorrhœa as educed from the best practice of contemporaries, coupled with that of the mature experience of the author.

SYPHILIS. By JONATHAN HUTCHINSON, F.R.S., LL.D. With eight Chromo-lithographs. Philadelphia: Lea Brothers & Co. Price $2.25.

This is the first volume of "Clinical Manuals for Practitioners and Students of Medicine" issued by the well-known house of Lea Brothers. It is a 12mo. vol. of 532 pages, well printed and artistically illustrated.

It is not necessary to say to those who have been close readers of his contributions, that Mr. Hutchinson is the most reliable student of syphilis of the day, but to those who have looked elsewhere for their teaching, they may enjoy in this little volume the crystallized statement of one who has gained the confidence of the medical world. The author's aim, as he declares in the preface, has been less at systematic completeness, than clinical exposition.

He has given us here illustrative cases the narratives of which tell their own story, and he has not failed "to allow their various weak points," as items of evidence, to be apparent. The author has adopted the microbian theory of the disease, and has, indeed, taught it for many years, and he has full confidence that some future investigator will discover the special microbe of syphilis.

The reader will find much in this little book that is new, or rather many of those things which have been regarded as so doubtful, or whose interpretation has been so difficult that they have never been allowed a place in books of this character.

Relapsing or recurrent chancre, which was believed in by Dr. Bumstead, but which he refrained from printing in his great work until he had accumulated more experience, is set forth here in several very significant cases.

It is not too much to say that this small book contains the best practical exposition of syphilis so far presented to the profession, and thus its advent will be hailed with satisfaction.

All of the chromo-lithographs are of value. Many of them are reductions of plates from the author's great work—"Illustrations of Clinical Surgery," which is a guarantee of excellence; and two figures of syphilitic keratitis from Frorieps are particularly fine.

CORRESPONDENCE.

NEW YORK LETTER.

Medical Matters and Men in the Metropolis.

Of all the dogmatic axioms promulgated by our medical forefathers, that one relative to the advantages of a milk diet, in some one of its many and composite forms, for infants suffering from any disease associated with, or characterized by, impaired digestion, has been adhered to with most tenacity and with the fewest dissentient opinions. The horoscope of milk is overcast with a shadow at last, however, and its field seems destined, through the developments of the modern scientific investigations, to a radical restriction in therapeutical alimentation. Heretofore, in the treatment of cholera-infantum, the gastro-intestinal troubles of summer in children, infantile apepsia and other allied disorders of the alimentary tract, characterized by disordered nutrition from indigestion, of equal importance with the application of direct medicinal agents, was the regulation of the diet; and the usual course was to restrict it to milk. This was either to be boiled or raw, with or without peptonizing ingredients, or used in conjunction with some one of the standard preparations of food—Leibig's, Mellins', Horlick's, Nestlé's, etc. In a recent article in the *Medical News*, Dr. Holt, of the New York Infant Asylum, very vigorously condemns the use of peptonized milk in the treatment of the summer diseases of infancy and childhood, recommending instead beef-tea, mutton-broth, barley-water, etc., when it is impossible to get breast-milk, which of course takes precedence over all other forms of diet. More recently, Prof. Victor C. Vaughan, of the University of Michigan, has contributed a series of articles to the same journal, in which he demonstrates, by the application of scientific truths, as well as by clinical records of cases under observation, the inutility, and, indeed, the positive danger and damage from milk as an article of diet in such affections. This is due, he says, to a poisonous principle—tyrotoxicon—which has been isolated, chemically, in milk. Tyrotoxicon, given alone and in large doses to cats and other animals of the lower orders, produces violent retching and purging, with death, in from one to four hours. In smaller doses, continued daily, there results a progressively increasing exhaustion and emaciation, with death finally. To quote from Prof. Vaughan: "It establishes a cholera-infantum condition. The similarity to cholera-infantum does not cease with the symptoms induced and the death of the animal; but the post-mortem condition agrees exactly with that observed in children after death from cholera-infantum."

Tyrotoxicon is one of several poisonous products of fermentative and putrefactive changes in milk. The untoward results of a milk diet in these diseases has been observed before, and its use has been condemned and abandoned by several eminent practitioners within the past few years. This condemnation has, however, been largely empirical heretofore, and advanced with diffidence, because of insufficient knowledge of the *modus operandi* involved. The isolation of these poisonous ptomaines and the clinical demonstrations of their toxic effect, affords a rational and scientifically exact basis of opposition, and the result can be readily anticipated. Milk as a *sine qua non*, like indiscriminate venesection, must be relegated to the traditions of the past. Dr. Vaughan, in his paper, gives some valuable and practical instructions for the prevention of putrefactive and fermentative changes in milk, and the consequent development of these ptomaines, which, if faithfully and efficiently carried out, will do much to lessen the danger of toxic infection.

THE NEW ANTIPYRITICS.

A noticeable feature observed in therapeutical usage in general practice in New York, especially to one coming recently from the South, is the very sparing use of quinine. This is peculiarly and interestingly strange in connection with the general prevalence—in the opinions of the laity, at least—of malaria in New York city. As an antipyretic, quinine has been almost entirely superseded by the new agents—thallin, antipyrin and antifebrin—of which list antifebrin seems decidedly the most popular. This, it seems to me, from a personal experience with the use of these drugs, is a natural result, consequent upon careful observations of the effects of these agents. Antifebrin is much more reliable as an antipyretic, is much cheaper, can be given in smaller doses and does not produce any nausea or cardiac depression, as compared with antipyrin, its great rival. Experimental research has greatly widened the field of application of these drugs. Their usefulness is no longer limited to the reduction of abnormal temperature. Headache of the congestive variety, sciatica and other neuralgiæ, inflammatory rheumatism and allied disorders have all been proven to be amenable to the influence of one or the other of these drugs. As antipyretics, when an immediate and radical reduction of temperature is desired, as in the various hyperpyrexiæ, these agents are much more reliable than quinine, or even the wet pack. In the few cases in which any one of these agents fails the substitution of one of the others is all that is required to produce the desired effect. Apropos to the subject of malaria referred to above, and as an evidence of its general prevalence (?), it is stated that one of the most eminent and wealthy of the physicians of the city of Brooklyn (formerly a distinguished surgeon in the Southern Army) has accumulated a large and lucrative practice through the simple announcement on his professional card: "Practice limited to the treatment of malaria." At least four-fifths of the patients who consulted him professionally in his specialty were not the subjects of malarial infection at all—the term had been used as a convenient cloak for the ignorance of former attendants.

MISMANAGEMENT IN NEW YORK HOSPITALS.

New York officials seem to have become infected recently with a furious delirium of investigation and reform, and their operations seem limited to no special field. In the general over-hauling three or four of the city hospitals, insane asylums and reformatories are included, and in the case of the Ward's Island Insane Asylum a true bill has been found by the grand jury, arraigning two of the attendants upon the grave charge of murder.

Quite recently a suit for $30,000 damages for malpractice against the New York Hospital on Fifteenth street, one of the most commodious and best equipped hospitals in America, excited a slight ripple in medical circles, but the charge was not sustained, and, indeed, the result of the trial was a complete vindication of the surgical proficiency and operative skill of the surgeon in charge, Dr. O. F. Bull, a gentleman of many personal accomplishments as well as of distinguished professional ability. Dr. Bull, it will be remembered, was the first to do a successful laparotomy for wounds of intestine. The case, that of a man shot in a brawl, with six intestinal bullet perforations, was published in full in the *Medical News.* Dr. Bull, operates during the summer at the New York Hospital two and three times a week, and his clinics are always well attended by interested spectators of the local faculty and from all parts of the country.

The strictest antiseptic precautions are observed in all the hospitals, though the spray is rarely seen. Instruments, sutures, sponges, and, indeed, all the paraphernalia of the operating room, are subjected to the rigid scrutiny of powerful germicidal and antiseptic solutions of bichloride and carbolic acid. Iodoform is *par excellence* THE dressing, either in powders or in the form of prepared gauze, with which the wound is either covered or filled. Boracic acid is sometimes seen, and salycilic acid gauze is also met with occasionally, but there seems to be an unanimous preference for iodoform. Dressings are rarely removed before the fifth or sixth day, unless some special indication should arise, such as fever or suppuration.

A NORTH CAROLINIAN'S METHOD OF OPERATION FOR LACERATED PERINEUM.

One of the most radical necessities of the day in medicine, particularly in some special branches, is that of expurgation or elimination of superfluous and confusing matter in the literature of text-books and journals. Every day some new method of treatment in disease, or some new operative procedure for surgical relief (?) is advocated by an ambitious originator, with the result of chaotic confusion, especially to the inexperienced. In general medicine there is necessarily some confusion and apparently superfluous literature, on account of the varying phases of disease, depending upon individual susceptibility and idiosyncrasy, but in surgery and in gynæcology there is less excuse, and even in general medicine much might be lost entirely from the literature of the day with no disadvantage to either doctor or patient.

In the field of surgical gynæcology is shown most markedly the accumulation of useless and confusing material, and in every department. For instance, the operation for lacerated perineum, very simple in the majority of cases, varies in its methods of procedure with almost every operation. Emmet, Sims, Thomas, Mundé, Goodell, Goelet, Hegar, Simon, Alloway, of Montreal, and others, have each originated some modification of the original operation with the claim of superiority in each instance. Of course, the extent of the laceration, and, to a certain degree, the condition of the patient and the complications of the case, influence the choice of a method in some instances, but the difficulty and confusion complained of, lies in the fact that each originator of a new method claims an advantageous application of his operation in *all* cases. Some systematic arrangement should be adopted by which the best features of each separate operation should be combined into one. In most instances the only point of difference lies in the method of introducing sutures, the dressing, or some peculiar step in paring the edges of the laceration.

Emmett's operation, because of its more or less complicated nature, is becoming less popular. That of Dr. Alloway, of Montreal, which consists of closing recent lacerations with *one* wire suture passed around the upper edge of the rent and twisted on the outside, has been quite extensively adopted in private and hospital practice lately here in New York. One of the best modifications of the old method is that originated by Dr. A. H. Goelet, of this city, a former North Carolinian, by the way, and a very accomplished and successful gynæcologist. The writer has had several opportunities of witnessing the advantages of Dr. Goelet's operation recently, in one of which, done by Dr. Carrol Lee, of the New York Woman's Hospital, the case possessed an additional and peculiar interest from the fact that cocaine was successfully used as the only anæsthetic. Dr. Goelet's method, an account of which was published in the *Medical News* (March 22, 1884), is about as follows: As to the denudations, avoid making more of a perineum than originally existed. Externally the denudation should not be carried further than the line of cicatrix of the old perineum. Denude the outer border first, commencing on the left side of vulva (right of operator) at the upper point of this line; denude a strip around to the point on the opposite side, taking care to follow the line of cicatrix, and not go too far out. As a guide to the limit of denudation internally (as suggested by Emmett), hook up with the tenaculum, the apex or crest of the rectocele at such a point that, when pulled forwards to the upper angles of the perineal cicatrix, it puts the posterior wall of the vagina gently on the stretch. Then remove a strip of mucous membrane from the upper point of the external boundary line on the left side of the vulva, to the point on the crest of the rectocele already determined upon, and from thence to the same point on the right of the vulva. The island of mucous membrane surrounded by these lines is then removed.

The next step is the introduction of the sutures. The vaginal rent is sutured with silk-worm gut or Lister's carbolized cat-gut, a small, short, *slightly* curved needle being used. The introduction of sutures is begun on the vaginal surface, at the termination of the vaginal rent, and each suture is tied as it is introduced. In this way the torn vaginal edges are stitched together up to the point where this line meets the perineal edge of the wound. Then, beginning at the bottom of the perineal rent, and using silver wire or silk-worm gut, making superficial sutures only, stitch these surfaces together, coaptating the edges carefully and closing the wound completely at the top, where both sets of sutures meet. The silk-worm gut is preferred for the internal sutures, as they may be left in for an indefinite time, and do not irritate or become absorbed. Eight or ten vaginal sutures are usually required, and six or eight perineal. The feel to the finger after all these sutures are tied, is that of the natural slope of the posterior vaginal wall. The perineal sutures may be removed in a few days, but the vaginal sutures are left in for two or three weeks, until the union is strong enough to permit of the vaginal dilatation to remove them. The advantages of Dr. Goelet's method over the old way of introducing sutures is evident! Better coaptation of the edges, which gives better and quicker reunion and prevents the urine or any discharge from uterus from coming in contact with the denuded surfaces. By its adoption the trouble and annoyance of using the catheter is obviated, and there is no puckering or thinning of the prospective perineum, with consequent interference with the circulation from compression.

W. B. Pritchard,
243 W. 54th St., N. Y.

Ethyl bromide has been revived as a chloroform anæsthetic substitute. Specimens having a disagreeable odor or an acid reaction should be rejected. Dr. Marion-Sims' fatal cases of ethyl bromide anæsthesia occurred with ethyl bromide having these peculiarities.—*Medical Standard.*

CURRENT LITERATURE.

BERGEON'S METHOD OF TREATING PHTHISIS.

Dr. Edward T. Bruen, of Philadelphia, reports 39 cases of phthisis treated by Bergeon's method (*Medical News*, July 2, 1887), and we lay before our readers his conclusions :

"To sum up the results of the examination of these cases, the record will be, benefited, 42 cases; of these, Lizzie F., M. and G. seemed to be in good health—though dullness and feeble breathing can be still detected over the portion of the lung which had been implicated—of the three, Maitland was the only case in which tubercle bacilli were recognized in the sputa, and the pulmonary disease is probably latent. Among the fifteen cases reported in which the results were negative, were three cases in which the treatment seemed to have a decidedly good effect, but their condition has fluctuated so much that I have, for fairness' sake, placed them in the negative list.

"The favorable effects secured by the treatment were lessened cough and expectoration, and disappearance of the physical signs of bronchial catarrh. Together with these results came lowered temperature and suspension of night-sweats. Temporary reduction of the pulse-rate fifteen to twenty beats, and temperature lowered from half a degree to one degree during the administration of the gas.

"In most of the cases I used the artificially prepared sulphur water, viz: 5 grains of sulphide and 5 grains chloride of sodium to a pint and a half of water, and this seems to have been the most satisfactory solution. After employing the treatment for several weeks, in some cases I have increased the proportions of the two salts gradually, adding 7½, 10, 15 and 20 grains by weekly additions; but in cases in which I have failed to secure good effects from the weaker solutions, I have derived no benefit from increasing the strength of the solution. Recently I have used the Sharon Spring sulphur water, and added the sulphide and chloride of sodium each day. By keeping the bottle tightly corked, I have been able to use the same bottle of water on two consecutive days.

There are a few details of consequence in administering the gas.

Until tolerance is established, a small amount, one pint to a quart of gas, has been used daily, then the same amount twice daily, and gradually increased. From a gallon to a gallon and a half can be ultimately injected without discomfort. If there is pain after using the gas, it should be used but once daily, and only a small amount at a time; the strength of the solution of sulphuretted hydrogen should also be reduced; for instance, two and a half grains of sulphide and chloride of sodium may be used. It is desirable to inject slowly, consuming an hour in giving a gallon of gas, and the patient should rest quietly an additional half hour until the gas is entirely absorbed from the bowel. The longer the time taken to administer the gas the better, especially when any pain is caused by the treatment. The admission of atmospheric air into the bowel should be sedulously avoided.

"In cases of intestinal lesion or diarrhœa, my experience has been unfavorable to the use of the gas, except in very small quantities. Chronic peritonitis also forms a contraindication to its use. In about two cases out of ten I have noted a faint reaction indicating sulphuret of lead, which was obtained by holding filter paper, saturated with acetate of lead, to the mouth of the patient during the administration of the gas. The reaction was in no case decided, and I cannot account for its absence in so many instances.

"In none of the cases have any injurious effects been observed, but I have noted in some individuals subnormal temperature during the use of the gas, and also when the stronger solutions of sulphide of sodium were used the appetite and strength of the patients seemed impaired and their spirits depressed.

"Two suggestions may be given for the failure of the treatment to accomplish better results. The first of these applies only to hospital cases. It is impossible in a large general hospital to secure the detailed attention to diet necessary to suit the capricious appetite of the consumptive. In treating consumption it is absolutely necessary to increase the vitality of the tissues, so that they will be unfavorable culture media for the bacilli.

"The second suggestion is, that in cases with inherited tendencies to phthisis, or in those who acquire a phthisical tendency, there is great vulnerability of the mucous membranes, which ever fosters an outbreak of catarrhal processes in the bronchial structures. In this way the good effects of the treatment are constantly opposed.

I incline to think that suitable climatic environment is an all-important adjunct to the proper settlement of the value of Bergeon's treatment. But it is certainly an important addition to our therapeutic equipment to have an agent capable of influencing very markedly bronchial catarrh in so many cases, especially the stay-at-homes.

"In a word, Bergeon's method, so far as I have used it, is chiefly valuable in those cases of pulmonary disease attended with bronchial catarrh. But I fear the trouble and detail necessary to its successful use will prevent many from employing the method, and I can easily see that the limitation of the power of Bergeon's method will cause it often to be set aside for other plans of treatment.

"In conclusion, I believe our efforts in the therapeusis of phthisis should always be directed rather to those measures which tend to establish the general health, rather than to hunt up specific forms of treatment. Suitable climatic conditions, and judicious alimentation, and appropriate personal hygiene remain, in my opinion, the first principles in the therapeutic management of phthisis, and Bergeon's treatment should be considered an adjunct to these."—*Med. News.*

IS TUBERCULOSIS OF THE LUNGS EVER CONTAGIOUS?

By F. I. Knight, M.D., Boston.

In July, 1885, a young lady of 19 came to my office with a history of cough of nine months duration. I found signs of phthisis in one lung. Her father was a very strong man; her mother had died of some nervous trouble after child-birth. There had been ten children, five of whom died in infancy, none of them with any brain or lung disease. There had been also six half-brothers and sisters, one of whom had died in infancy. Of the uncles and aunts, on both sides, only one uncle had died of phthisis. The patient gradually declined, and died April 15, 1887. She was accompanied in her visits to my office by an older sister, twenty-three years of age, who had given up everything to attend to her. This sister, while not robust looking, appeared well, and said that she had always been so. She occupied the same room and bed with her sister. This I protested against, and advised her to go out regularly every day for walks in the fresh air.

The last record made of their visits to me was in the latter part of October, when the phthisical patient became too sick to come to me, and went under the care of her family physician in a neighboring city; she died, as I said, on the 15th of April On the 19th of April the sister came into my office with the following history: She had continued to attend closely upon the invalid all winter, and had disregarded all my advice. She had even slept with her sister up to within five weeks of her death. She was with her night and day. During the latter part of her sister's life her breath was so offensive that she could eat almost nothing, and only kept herself up by the free use of stimulants. She stated that she had a little drp, hacking cough for a month. She breathed rapidly, but said there was no dyspnœa. On examination her pulse was found to be 140. Temperature 104°. On examination of the chest, subcrepitant râles were heard in both upper lobes, front and back, and the diagnosis of acute pulmonary tuberculosis was made. Examinations April 26th and May 3d confirmed the diagnosis. On the 21st of May she came to my office so weak that she had to be assisted from the carriage to the house. She reported hæmoptysis of several ounces two weeks before. She was so weak that I did not examine her chest. Pulse 160; temperature 103.4°. I did not see her again, and she died June 17, 1886, about two months after I first examined her, and three months after the beginning of the dry cough.

Who can fail to believe that the disease and death of this patient was caused by attendance upon her sister? Hardly any one will deny this. Admitting it, would she have succumbed to acute *pulmonary tuberculosis*, if she had attended upon a sister ill with some other disease? As she had no such hereditary tendency I do not think so. How often do we see patients worn out with much longer attendance upon the sick, and yet not become tuberculous? And how often do we see strong women without the slightest hereditary tendency succumb to attendance upon tuberculous patients.

It is useless to allege in this connection that ordinary attendance upon the sick in consumptive hospitals does not affect the attendants. I admit this fact, but the attendance is not so prolonged, nor so close as in families. Let any one who has doubt about the clinical evidence bearing upon this point read the little brochure of Webb. The fact is that tuberculosis is so common with us that we have almost ceased looking for the immediate cause in any case, especially if relationship gives us a chance to attach the blame to heredity. I believe, however, that there are hundreds who have by inheritance that peculiarity of pulmonary soil which favors the development of the tubercular disease, who would not show it unless they were brought into contact with those already affected. Whether all cases require such a transmission of germ we do not know.

In what manner is it possible that the disease is communicated? It has been claimed that bacilli have been found in the breath, but it is, perhaps, more probable that the communication in most cases is by dried sputum, which becomes diffused in the atmosphere. We have abundant proof that tuberculosis can be readily communicated to animals little liable to it, for example, dogs, by causing them to inhale for an hour or two a day an atomized solution of the sputa of tuberculous patients. (See the experiments of Tappeiner and others in substantiation of this statement.)

So, then, I say that the appearance of tuberculosis of the lungs in countries where it was previously unknown, with the ingress of people from countries where it was common, the marked increase in the disease in the neighborhood of health-stations resorted to by the tuberculous, the personal history of the development of cases in our midst, and experimental work with the sputa, all point strongly to the probable communication of the disease under favorable conditions, and make it not only incumbent upon us, in case of pulmonary tuberculosis in a family, to establish precautions against communication of the disease, but makes us criminally negligent in failing to do so.

What precautions shall we take? These pertain (1) to the patient; (2) to the quarters he occupies; and (3) to the exposed attendant.

The patient should be made careful in the disposal of his sputa, either to deposit them in a cup in which some germicide has been placed, or if the patient is feeble and obliged to use cloths, let them be destroyed before any drying occurs. It would hardly seem to be necessary to warn respectable patients not to spit about them carelessly, yet I have seen with respectable people the most utter indifference in this regard. I have seen a patient with hæmoptysis lying in bed on his back letting fly his expectoration in every direction, so that the bedding, floor and walls of the room were well covered with sputa. I have seen a beautiful prima donna of the opera spit right and left over a handsome hotel carpet. Neither of these patients was American. I have, however, seen an American, a distinguished citizen, afterwards United States Minister to one of the European Courts, sit in the office of a distinguished consultant and squirt a sickly stream of tobacco-juice between his teeth over a fine straw carpeting just laid.

For disinfection of the spit-cups, Dr. Ernst informs me that a five per cent. solution of carbolic acid is the best. Corrosive sublimate does not answer, as it coagulates mucin and does not reach the bacilli at all.

In regard to the room: we should secure change of air by every known device, and as long as possible by a daily removal of the patient from his room for the purpose of thorough ventilation. Clothing and bed-linen should be frequently changed. The absolute value of antiseptic sprays for the room in such cases we know not, and the use of those which are offensive in themselves should not be recommended. But such as are pleasant to the patient and attendant would be of service at least in counteracting the disagreeable odor which attends the last stages of pulmonary disease.

In regard to the exposed persons, let it be said that from the moment tubercular disease is discovered another person should not occupy the same bed, not only for the sake of the exposed person, but also that of the patient, who will rest much more comfortably alone. Sleeping in the same room should also be forbidden, as we seem to be more susceptible to all infectious diseases during sleep. The attendant should have daily exercise in the open air, and if a relative, an occasional complete change, if possible. In case of any failure in health, this should be insisted upon, and, although the physician cannot always prevent self-sacrifice on the part of friends, he can often modify it. At any rate, he should not feel that relief of his patient was his only duty, but that his duty extended to the surroundings of his patient, and required that these should be arranged with due regard to the protection of relatives and friends.

If there is any decided hereditary tendency to the disease, relatives should, if possible, be prevented from any attendance upon the sick, and put at once upon proper hygiene.—*Boston Medical and Surgical Journal.*

A CYCLE OF TUBERCULOSIS INFECTION.

Besides cases of infection of tuberculosis in the human subject, as described in Dr. Knight's paper in another column of this *Journal*, well authenticated instances have not been wanting of transferrence of tuberculosis from man to animals and vice versa. The domestic fowl has been known to prove an easy prey to this species of infection, as when the sputum of a consumptive patient was cast into a barn-yard, infecting a whole flock of hens. The following case, reported by Dr. Lamallarée, of the Congress of the French Scientific Societies, in Paris, and recorded by the French correspondent to the *Therapeutic Gazette*, shows the chain of contagion of tuberculosis (1) from man to man (2), from man to animal (3), from animal to man.

In 1872 a young man liberated from military service after he had been a prisoner of war, came to a small village, where he settled as a wood-cutter. Although suffering from bronchitis, he married a young girl of the locality, but soon after he was taken with hæmoptysis, and died within a year after his marriage, leaving a child rather delicate. The widow, who had been a strong, healthy girl, gradually became consumptive, so that in 1885 she had cavities in her lungs, profuse expectorations, and now she presents all the symptoms of an approaching end. Dr. Lamallerée was recently called upon to see a neighbor of the widow just mentioned, a young woman whose antecedents could not lead him to suspect tuberculosis. The patient, nevertheless, was found to suffer from incipient phthisis. After long questioning, it was ascertained that within some four months she had eaten eleven chickens bought from her neighbor, and as her strength was failing she had roasted them very slightly, hoping to thus get more nourishment. From her house the doctor stepped into the widow's whose case he knew well, to ascertain how the hens were fed, how they had died, and whether they were in the habit of absorbing sputa. On this point he received prompt satisfaction. As he was walking into the house he heard the widow have a fit of coughing, and immediately a legion of chickens ran in, as they are wont to when hearing the voice of one who feeds them, and began to fight around the bed for the consumptive's sputa. One of the hens having died the same morning, the doctor found in the animal seventeen soft tubercles; the liver was honeycombed with them, and the liquids contained many bacilli.—*Boston Medical and Surgical Journal.*

HEALTH-GIVING FORESTS.

Dr. A. L. Loomis writes in high degree of praise of the purifying effects of evergreen forests upon the surrounding atmosphere. He does not attempt to explain what the health-giving emanation from the forests may be, but writes from facts under his own observation.

The summary of these observations we borrow from an editorial in the *Maryland Medical Journal:*

"The belief in the curative effects of the atmosphere of pine forests, Dr. Loomis well observes, is an old one, and has long been held, not only by physicians, but the non-professional public. Whilst various attempts have been made to explain how the beneficial effects of these forests are secured, the probable explanation is found in the emanations from such forests which render the air not only aseptic, but antiseptic. What this antiseptic agent is the chemical laboratory has not been able to supply, but it is probable that it is the product of the atmospheric oxidization of turpentine. In support of this view Dr. Loomis cites the fact that the turpentines alone have been regarded as of special service in the treatment of all forms of catarrh, especially catarrh of the respiratory surfaces. It is quite well-known that the atomized solutions and vapors of turpentine are of decided value in diseases of the respiratory organs, and have been constantly used in this class of cases. Turpentine is not only a powerful deodorizer and antiseptic, but its local and constitutional effects are those of a powerful germicide as well as stimulant. The presence of this turpentine vapor in the pine forest cannot be questioned. Whatever benefit is derived from the inhalation of this pine forest atmosphere, must, in the absence of any other known cause, be referred to the presence of the turpentine vapor. How this atmosphere can arrest tubercular processes is not difficult to understand in the light of our present knowledge.

"It has been well shown that the putrefactive processes within the pulmonary tissue are due to, or accompanied by, the presence of bacteria, which by their presence induce a destruction of tissue and a septic poisoning which sooner or later destroy life. Any agent which will destroy these bacteria render them inert or arrest the putrefactive changes which are going on will exercise a beneficial influence upon the disease. Antiseptic inhalations act in this way;

they virtually wash out the septic lung cavities, arrest septic absorption and for the time being stay the progress of the disease. It is in keeping with this theory of treatment that the Bergeon method has latterly somewhat revolutionized the treatment of tubercular phthisis. Dr. Loomis is convinced that we have in the atmosphere of the pine forest a most valuable antiseptic and corrective agent for cleaning lung cavities, correcting putrefactive changes and arresting the multiplication of bacteria. The views of so high an authority are entitled to eminent consideration. It may be pertinent to inquire whether we may not be able to surround our tubercular patients with a pine forest atmosphere within their own homes? In a measure we believe we can. The various instruments at our command make it possible to atomize antiseptic agents to such an extent as to render them possible of complete inhalation. In this way turpentine, eucalyptol oil and other such antiseptics may be employed to decided advantage. Indeed, such substances are now freely employed by the specialist, and we would suggest their universal adoption by the general practitioner and by all who undertake phthisis."

In addition to this, Mr. Rimmell, of London, some years ago, in the *Medical Times and Gazette*, recorded some experience in the purification of the atmosphere by certain odorous oils—lavender, lemon, orange, bergamot, etc., etc.

It has been a long recognized fact that in the days gone by, when Wilmington was a very unhealthful place, that the erection of turpentine distilleries in the town was the beginning of a new and better condition of things as to health. The balsamic odor of distilling turpentine wafted through the town from the river front by the prevailing W. and S. W. breezes, is always grateful to the lungs, and without doubt purifying to the atmosphere. It is to be regretted that the distillation of turpentine is year by year leaving us, but it is certain we have, and may have more, of a more certain agent, if we desire, namely, good underground drainage.

Let all the towns in the State adopt the practical lesson, and leave the pine trees standing, and not make the great blunder of clearing off every available spot that might be used as a park, as Wilmington and Raleigh, and other towns have done. It is not too late now for all these towns to make great exertions to raise native forest trees, and none of them would be half so desirable as the long-leaf pine.

TREATMENT OF SPECIAL CONDITIONS IN SYPHILIS.

[From Syphilis. By Jonathan Hutchinson.]

Ulcers in the Throat and Sores in the Mouth in the Secondary Stage.—Give mercury, use black wash as a gargle, or dust the sores with iodoform. If they prove intractable, touch them lightly with the acid nitrate of mercury or some other caustic. If very painful, it is necessary to consider whether they may not be aggravated by mercury, especially if the latter have been long used. If this appears probable mercury must be disused and the iodide of potassium given. Smoking must always be prohibited.

Ulcers in the Throat in the Intermediate or Tertiary Stages.—These are often phagedænic. Iodide of potassium must be freely given and iodoform applied by insufflation or by means of a camel-hair pencil. If, in exceptional cases, the condition persists, the sore must be freely touched with the acid nitrate of mercury. It is a rapidly destructive condition, and the treatment must be efficient. There is usually no objection to small doses of mercury, but the iodide will generally suffice.

Iritis, Retinitis, Neuritis, etc., in Secondary Stage.—Push mercury rapidly to slight ptyalism, and in iritis use atropine very freely. Large doses of iodide of potassium will usually suffice for these affections, but mercury is better.

Ulcerating Secondary Eruptions of the Rupial Type.—These usually occur after mercury has been given in too large doses, has disagreed and been wholly laid aside for sometime. Mercury, in combination with the iodide of potassium, is indicated, or mercury may be given alone. The iodide alone is rarely sufficient. Ptyalism is to be carefully avoided, and, if success is soon obtained by other methods, inunction or fumigation should be resorted to. Sea air is often very valuable. When once the cure sets in it usually progresses well and is in the end complete. Iodoform ointment should be used to all sores.

Phagedæna in all Forms and Stages.—Iodoform is by far the most convenient, least painful and most efficient agent. It will probably supersede all the older methods. Should it not succeed, constant immersion, the acid nitrate of mercury, or the actual cautery, may be employed. Mercury and the iodide should be given with opium. If all fail, the patient must be at once sent to the seaside, and the same remedies used there.

Disease of Arteries [indicated by cerebral attacks.]—Give a long course of small doses of mercury, or, less efficient, of the iodide.

Periostitis and all Forms of Bone Affection.—Here the iodide of potassium is most efficient and relieves pain more quickly than anything else. If the case resists, however, mercury should be used, and it will often succeed in removing hard nodes which the iodide had failed to influence.

Periostitis and Bone Affections in the Inherited Disease.—The same remedies must be used, but much less rapid results must be expected. Very often nodes in this connection resist treatment for sometime, and then suddenly disappear.

Lupoid Affections of Skin in Tertiary Stage.—Rub in iodoform ointment, and apply it on lint, or, if the point be one to which this cannot be conveniently used, or the smell be an objection, apply the acid nitrate of mercury freely. Iodide of potassium may be given, but if not successful, it should at once be substituted by mercury, which often succeeds when the iodide fails.

Phagedænic Lupus of Nose and Face from Inherited Syphilis.—The destruction may be very rapid, and the treatment must be prompt. Cauterize freely with acid nitrate, and then dress with iodoform ointment. Give iodide and bark.

Interstitial Keratitis of Inherited Syphilis.—Give a long course of small doses of mercury with bark. Send patient to sea or country during the treatment. Use atropine or belladonna fomentations.

Locomotor Ataxy or other Chronic or Aggressive Nerve Disease with Syphilitic Antecedents.—Give mercury in small doses to slight ptyalism. If benefit results, repeat the treatment after a month's interval, or give smaller doses without ptyalism over a period of six months or a year. Many such cases relapse, and need a repetition of treatment. Inunction is very useful, but not more so than small doses by the stomach. Iodide of potassium is also very efficient, but probably less so than mercury.

In cases which resist mercury, and in which it is wished to induce ptyalism rapidly, use the hypodermic method, employing a third of a grain every day for three or four days; or use mercury by the mouth or inunction, and insist that the patient shall keep his bed.

In cases of pregnancy in which it is desired to protect the fœtus, administer small doses of mercury [one grain of grey powder, or one drachm of the solution of bichloride, three times a day], through the whole period. There is possibly a minor objection to this, that it may damage the child's teeth [first set], but upon this point careful observation is necessary.

In cases in which marriage is in prospect, let the patient take small doses of mercury continuously during the whole period before marriage. Abstain from the iodide of potassium. However efficient and long-continued the treatment, no one should marry until two full years have passed from the beginning of the disease.

Prof. Ewald has enriched our diagnostic resources by a new procedure for investigating the motor power of the stomach. [Berlin Medical Association, June 15th.] We know pretty well the chemical changes taking place during digestion, but our experiments on the time required by the stomach for transmitting food into the duodenum have hitherto been limited to patients suffering from gastric fistula. Trials made in the normal state of health have always failed. A means has now been found in salol excellently adapted to solve this question. Nencki, who discovered salol, has stated that it remains undissolved in the stomach, but is decomposed into phenol and salicylic acid by the pancreatic juice. The first part of this dictum is correct, the latter incorrect, for salol is decomposed by any neutral mucous membrane, whilst the juice of the pancreas seems rather to delay the decomposition. Salol, on reaching the bowels, immediately dissolves, and shows almost instantly in the urine as salicyluric acid. This easily yields a red precipitate with chloride of iron. This reaction will show almost exactly the moment of the entrance of the food into the bowel. The urine of seven persons in sound health showed the reaction to take place mostly within three-quarters of an hour, rarely within half an hour. It took two or three hours in seven cases of "ektasia ventriculi," this disease being distinguished by loss of motor power in this organ. On applying the electric current to the abdomen the reaction took place in normal cases a quarter of an hour sooner; in cases of enlargement of the stomach, half an hour sooner. This experiment says much in favor of this method of treatment, which is despised by so many physicians. Science owes to Prof. Ewald a discovery equally important in theory and in practice.—*British Medical Journal.*

NOTES.

Delegates to the International Congress for the North Carolina Medical Society.—Dr. T. D. Haigh, President of the North Carolina Medical Society, has appointed the following gentlemen as delegates from the Society to the International Medical Congress that will convene in Washington the 5th of September:

Dr. E. F. Ashe, Wadesborough.
" H. T. Bahnson, Salem.
" W. P. Beall, Greensborough.
" W. J. H. Bellamy, Wilmington.
" Julian M. Baker, Tarborough.
" Paul P. Barringer, Davidson College.
" S. D. Booth, Oxford.
" T. E. Balsley, Reidsville.
" A. G. Carr, Durham.
" W. T. Cheatham, Henderson.
" Charles Duffy, Jr., New Bern.
" J. M. Covington, Rockingham.
" W. T. Ennett, Burgaw.
" H. B. Ferguson, Halifax.
" F. T. Fuller, Raleigh.
" Joseph Graham, Charlotte.
" R. F. Gray, Winston.
" Eugene Grissom, Raleigh.
" J. A. Hodges, Fayetteville.
" P. E. Hines, Raleigh.
" E. B. Haywood, Raleigh.
" E. H. Hornaday, Willow Green.
" James Hughes, New Bern.
" J. W. Jones, Tarborough.
" S. R. Jones, Charlotte.
" A. W. Knox, Raleigh.
" R. H. Lewis, Raleigh.
" W. H. Lilly, Concord.
" John McDonald, Washington.
" James McKee, Raleigh.
" J. W. McNeill, Fayetteville.
" J. F. Miller, Goldsborough.

Dr. W. P. Mallett, Chapel Hill.
" P. L. Murphy, Morganton.
" C. J. O'Hagan, Greenville.
" R. L. Payne, Lexington.
" N. J. Pittman, Tarborough.
" C. M. Poole, Salisbury.
" S. S. Satchwell, Rocky Point.
" J. F. Shaffner, Salem.
" E. M. Summerell, Salisbury.
" George G. Thomas, Wilmington.
" R. H. Winborne, Edenton.

THE DANGERS OF SANTONIN.—A correspondent in the *Therapeutic Gazette* (Dr. Blinn) calls attention to the dangers of Santonin. We have had an increasing mistrust of santonin for many years, and now permit its use only when some mother insists that her child has worms, and did well formerly with a dose. After a few successive cases in which serious symptoms followed the administration of santonin, we are willing to return, with a considerable degree of relief, to the friend of our former days, so liberally dispensed by the negro " mammies," viz : Jerusalem oak (*chenopodium*) seed in molasses. Chenopodium oil is largely used in "dead-shots" and "worm-killers," and is not without its objections, but the seed mixed in some vehicle like honey or molasses, is unobjectionable.

H. W. RAVENEL, LL.D.—Dr. H. W. Ravenel died at his home, in Aiken, S. C., on the 16th July, in the 73d year of his age. He was a botanist, eminent in the department of mycology, and, together with Dr. M. A. Curtis, was a pioneer in this difficult branch of learning in the South. His large herbaria will probably be for sale, and no better opportunity will be found of securing complete and authentic sets of flowering and cryptogamic plants than this for a long time to come. Dr. Ravenel received his degree from the University of North Carolina in 1886. He was a most thorough student, caring little for worldly honors, and pursued his work *con amore.* The war left him penniless, so that he was not able even to secure an outfit whereby to pursue his studies, and the small remuneration which came to him later was ridiculously inadequate to the original research to which he devoted himself so assiduously. He has left the South the legacy of his great achievements, but unfortunately for the South there appears no successor in his department.

Arsenic Arrests Iodide Eruptions.—Mr. Hutchinson calls attention to the fact that arsenic is tolerably efficient in preventing the eruption from iodides and bromides.—*Syphilis, by Jonathan Hutchinson, p.* 305.

Daily Editions of the Proceedings of the International Congress.—The *Medical Register*, of Philadelphia, has for some months announced that it would issue a daily number during the session of the Congress.

The *New York Medical Record* announces that it will have a corps of medically educated stenographers at the sessions of the International Medical Congress, and that a condensed report of the proceedings will be telegraphed to the editors each day for publication in their current issues.

Apomorphine in Croup.—Dr. Alexander F. Samuels, in *Therapeutic Gazette*, writes favorably of the treatment of croup with apomorphine. He dissolved 1-6 gr. in six teaspoons of water, and administered a teaspoonful every five or ten minutes until vomiting ensued. If not very novel, it is worth remembering.

Death from Ether.—A patient was etherized by Dr. White in Philadelphia this month, preparatory to an operation for hemorrhoids, to be done by Dr. Hayes Agnew. He had once before been under the influence of ether for an operation and no reason existed for fear of disaster until, as the operation began, he was suddenly seen to cease breathing, though his heart continued to beat. Every effort was made to revive him without avail. The results of the *post mortem* have not been reported.

Poisoning by Locust Bark.—Dr. Emery, of Brooklyn, reports the poisoning of thirty-two boys, at an orphan asylum, from chewing the inner bark of the locust tree, which had been stripped from fence posts. This, we believe, is the first instance on record of poisoning from this cause. Locust bark should be investigated chemically.—*Medical and Surgical Reporter.*

[The locust referred to above is Robinia pseud-acacia, bearing conspicuous white flowers, and not the honey-pod locust—Gleditschia.—Eds.]

The Library of the Surgeon General's Office is now (*Medical News*, August 6th) being removed to the new fire-proof building erected for its special use, and the new arrangements are expected to be completed in September.

Malarial Prophylaxis.—The *New York Medical Record* calls attention again to the use of lemons. The fruit is sliced whole and boiled with three cupfuls of water, which is boiled down to a pint. It is then strained with pressure through linen and set aside over night. It is taken before breakfast. Some of our readers may have had some experience in the use of lemons in this way.

The University Shakspere Club.—We acknowledge the compliment of a copy of the first publication of the above-named Society, and note with pleasure this evidence of literary culture which has been excited by the good teaching by the professors of literature. A handsome engraving (the Felton portrait), with autograph of Shakspere, adorns the pamphlet.

Funds for the International Medical Congress.—We learn by the advertisement in the *Journal of the American Medical Association*, and from other sources, that there is a great lack of funds to carry on the work of the Congress. This condition of things has been long anticipated by those in a position to know, and it leaves the officers in a very perplexing position. We would be pleased to know that there are those among the doctors in our State who are able and willing to help. If so, they can address their communications to Dr. C. H. A. Kleinschmidt, Secretary, Washington, D. C.

German and American Students.—Dr. N. Senn, in one of his letters to the *Journal of the American Medical Association*—letters that will be read by every one with pleasure and profit—makes an observation which is gratifying, as the popular opinion prevails to the contrary. He says, after commenting upon the German method of examining a candidate for the degree: "There is no question in my mind that the average American student learns more in one month than the average German student in three. He learns more, not because he has better teachers, or better facilities, but he makes better use of his time."

THE COLLEGE OF PHYSICIANS AND SURGEONS OF NEW YORK (*Medical News*) announces that for the session of 1888–'89, *et seq.*, a preliminary examination will be required in English, Latin, arithmetic, algebra and plane geometry.

BLACK HAIR DYE.—In Dr. McCall Anderson's work on "Diseases of the Skin" (*Therapeutic Gazette*) a new hair dye is described as accidentally discovered. It consists in the use of a solution of bichloride of mercury, gr. ij to ℥ j of water, for a few days, and following with one of sodium hyposulphite, ʒ j to ℥ j, a few applications making the hair nearly or quite black, without staining the skin or clothing.

ZIGADENUS NUTTALLII.—Messrs. J. U. & C. G. Lloyd give a description of the above plant (*American Druggist*), called popularly *Death Camoss.* It is nearly allied to Colchicum and Veratrum botanically. It is said to be a narcotic poison, causing when taken extreme thirst, constant vomiting, dilatation of the pupil and coma, and (sequel) inflammation of the stomach." Two species of zigadenus grow in this State, one in the mountains, the other in the coast counties, viz: *Zigadenus glaberrimus* and *Z. leimanthoides.* These latter have not been investigated, but have no popular bad repute.

WcMedJ(OS) 20.128-129, #2, Aug 1887

DR. WILLIAM BEAUMONT, THE FOUNDER OF ANIMAL CHEMISTRY.—The American profession will thank Prof. Steele for the service he has done them in reviewing the life of Dr. William Beaumont, the founder of our knowledge of the physiology of digestion. In the August *St. Louis Courier of Medicine* we have the story told anew, and with affectionate reverence, by one whose student life reached to the days of Beaumont's work, and whose pupil he was.

Dr. Beaumont's experiments upon Alexis St. Martin were begun in 1822, when he was only 27 years of age, a surgeon in the army. St. Martin, his patient, a Canadian, had been wounded by the accidental discharge of a musket, which partially shot away the left side of his body. A long year of convalescence followed the wound, during which time he was assiduously treated by Dr. Beaumont, and the patient left with an incurable fistula which led to the stomach. Failing to secure the healing of the fistula, two years later the young surgeon appreciated his advantage and instituted a series of experiments on the properties and powers of the gastric juice, on the motions of the stomach and appearance of its villous coat, on the comparative digestibility of different articles of food, and on the effect of mastication and insalivation.

St. Martin was a particularly unruly patient, and in spite of the money spent on him by his devoted physician, he would run away and interrupt the progress of experiments. These experiments were carried on through several years at Fort Mackinac, Fort Crawford, Prairie du Chien and Washington. Dr. Beaumont had the assistance of noted chemists and physiologists, and among them Profs. Silliman and Dunglison. Believing that he could find abler physiological chemists in Europe, he sought the assistance of the government, which was not given. Finally, he determined to undertake the visit to Europe with St. Martin, at his own expense. He obtained leave of absence for a year, which was cut down to six months afterwards, and believing that the time was not adequate, he abandoned the undertaking. The European profession took great interest in this experiment, recognizing in it the inauguration of studies which have since been developed into a real science of physiology. The first publication of Dr. Beaumont's experiments was in 1833, but a second edition was not called for until fourteen years later. It was translated into French and German in 1834, and published in Scotland in 1838, by Andrew Combe, the eminent physiologist.

Dr. Beaumont died in St. Louis in 1853, at which place he was engaged in the private practice. In 1849 he was at his post battling with the cholera, although then over three score years old.

It is the honor of young America to have inaugurated anæsthesia in surgery, to have inaugurated ovariotomy, and to have inaugurated the science of animal chemistry, and it is proper that Americans should now and again rehearse this history of their small beginnings, but it seldom happens that a pioneer in a great work has a more enthusiastic and high spirited biographer than Dr. Steele.

A NEW TEST FOR MORPHINE.—A novel and very beautiful test for the presence of small quantities of morphine (1-200 gr.) has recently been suggested. To the solution to be tested add a few drops of strong sulphuric acid and about the same quantity of a solution of sulphate of sodium. Heat the mixture in a porcelain capsule, and directly it begins to give off sulphuric vapor cool it suddenly, when it assumes (if morphine be present) an intense violet coloration. If the mixture be further heated, it turns brown, and when cooled, the addition of a few drops of water determines a vivid red coloration, which turns a pale green if more water be added. If at this stage an equal bulk of chloroform be poured into the mixture and well shaken, the chloroform becomes of a bright blue color.—*British Medical Journal.*

WHAT SALT OF QUINIA SHALL BE USED HYPODERMATICALLY?—The *Therapeutic Gazette*, of May 16, 1887, answers this question as follows: "As regards *quinine*, the question appears to be settled, for the time being at least, in favor of the *hydrochlorate*. At the last meeting of the Paris Society of Pharmacy (April 6th) the merits of the rival claimants, the sulphovinate and the lactate, were discussed and summarily disposed of. The *sulphovinate* has the disadvantage of decomposing when kept, and thereby becoming apt to cause abscess when injected; the *lactate* of being but little soluble when crystallized, so that the solutions have to be made extemporaneously from freshly precipitated quinine and lactic acid, with some precautions to insure the percentage of active principle. On the contrary, the hydrochlorate is a stable compound, sufficiently soluble, and easily procured from dealers in well-defined crystals, much less liable to adulteration than the ordinary medicinal sulphate. The reason of this comparative purity may be that the sulphate is an old acquaintance of the dealers, in fact, too familiar to them, while the hydrochlorate is a new-comer. But it is unnecessary to borrow trouble; suffice it to say for the present that this salt appears to be the most eligible quinine compound for hypodermatic uses, and that it is, in the actual state of science, found in commerce unadulterated with other cinchona alkaloids.—*Medical Progress.*

THE CONTAGIOUS DIARRHŒA OF NURSING CHILDREN, AND ITS BACILLUS.—Hayem recently reported to the Academy of Medicine some investigations which he had made to determine the nature of the contagious element in the diarrhœa of nursing children, and its most efficient treatment. He was led by the failure of general medication to prevent relapses, to order all bedding and linen of the little patients to be disinfected with bichloride of mercury, when he observed that the disease, which had become epidemic, was checked. An examination of the dejecta showed that the greenish color present was dependent upon masses of bacilli and substances formed by them. Cultures were readily made of these microbes, and their behavior toward various antiseptics observed. The reaction of the matter in which they were voided he found was neutral or alkaline; and accordingly the effect of acids was tried. It was found that lactic acid, even in small quantities, destroyed the cultures made upon peptonized gelatine. In doses of a teaspoonful of a solution of two parts to one hundred of water, given a quarter of an hour after nursing, and repeated from five to eight times daily, lactic acid gave excellent therapeutic results, surpassing naphthalin, iodoform, sulphide of mercury and calomel. Hayem concludes that altered gastric secretions, in the dyspepsias of nurslings, permit the microbes to enter the intestine with their germinating power undestroyed; and finding there an alkaline medium of growth, they increase rapidly. He considers that the dejecta, as received upon linen and bedding, contain the contagious elements. He has instituted experiments upon young animals with the cultures obtained from his patients, the results of which will be of interest.—*Medical News.*

VIGIER recommends in the *Gazette Hebdomadaire*, June 17, 1887, the following formula :

℞.—Acid. lactici............ .... 2 parts.
Syrup. simpl......................... 98 "
Essentiæ citronis...................... q. s.—M.

Filter.

Sig.—2 or 3 teaspoonfuls daily.

Koch has already shown, in his studies of the coma-bacillus of cholera, that they are killed by the lactic acid of the normal gastric secretion, and that it is when the activity of this physiological safeguard is interfered with or destroyed that the bacilli pass uninjured into the intestines, to multiply and produce the characteristic dis turbances there. The effects of lactic acid upon these microbes, and the recent investigations of Kolischer, of Vienna, upon the tubercle bacilli as affected by phosphoric acid, suggest the acids as a class of germicides whose study promises information of practical value.—*Medical News.*

M. Gayon and Dupetit, at a recent sitting of the French Academy, presented a method for preventing the secondary fermentation in the production of alcohol, to which the formation of the higher alcohols are due. It was the addition of bismuth salts to the fermenting fluid, they claimed, that thereby only the pure ethylic alcohol was generated.—*Medical and Surgical Reporter.*

Ricinus Communis.—Mr. Thomas Dixson draws the following conclusion from a paper with the above title published in the *Australasian Medical Gazette* for March and April, 1887 :

1. That the castor oil contains only a gentle aperient, while the castor seeds contain a violent, irritant one.

2. That the seeds should never be used as is done in some countries by the "herbalist," as aperients, deaths in great agony having been so caused.

3. That in castor oil the aperient substance seems to be an oil or resin, and is certainly not the same body which we find in the seeds, after the oil has been extracted, as stated wrongly in text-books.

4. Nauseous material can get into the oil through it being heated, or through it being expressed from the unshelled seeds; for the unshelled seeds yield, to alcohol or ether, a brown substance of ill smell and acid taste, but not aperient.

5. That if the seeds were shelled before the oil were pressed out cold, an almost tasteless oil is got, while the cake left behind would, if cooked, form an albuminous, pleasant article of food, especially of use in India, where thousands of tons of the cake are made yearly in a crude way. In famine, this would be a valuable adjunct to rice, seeing that meat is not eaten by Hindoos.

6. That the active principle is probably the very glycoside found in the seed, which, through a slight change in chemical composition (hydration perhaps), loses its activity (*cf.* convolvulin, which readily changes when heated in presence of alkalies to the inert convolvulinic acid).

The leaves of the castor plant have been long used locally for encouraging lactation. Mr. Dixson was unable to obtain any traces of an active principle, either aperient or otherwise, from the fresh leaves; possibly the benefit may be due to their being large, soft and pliable, and so suitable for covering the surface well and closely, and encouraging local warmth as non-conductors.—*Therapeutic Gazette.*

COUNTING THE RIBS.—Physicians are frequently mistaken in counting the ribs. One must never start at the clavicle. We must start from the suprasternal notch, obliquely and below which is the first intercostal space. Or again, by palpation of the sternum the first projection is the junction of the first and second piece, at which we find the articulation of the second rib. One is sometimes astonished at the space between the clavicle and third rib. One forgets the breadth of the first rib.—*Canadian Practitioner.*

FROM DR. SAJOUS, in "The Principal Objectionable Features of Intubation," published in the *New York Medical Journal*, we give the following conclusions:

"Recapitulating, we have, then: Obstruction of the tube by detached membrane, due to the limited diameter of its interior.

"Crowding down of loose membrane during the introduction of the tube, due to its inordinate length.

"Passage of food through the tube into the trachea, due principally to its weight.

"Momentary arrest of respiration during the introduction of the tube, due to the presence of the obturator.

"Liability of the tube to be coughed out, due principally to the limited diameter of the interior.

"Slipping of the tube into the trachea, due to its weight and to the conformation of its head.

"We have now considered the principal defects of intubation, and I have given you what to me seemed to be their origin. I may be right, I may be wrong in my conclusions. I give them to you for what they are worth—food for thought. Let me say, however, as an encouragement, that by eliminating from the statistics in my possession the cases of death that I thought might have been avoided, had the instruments reached the degree of perfection that they will some day reach, the proportion of recoveries, instead of 25 per cent., became 43 per cent. This is, of course, a mere estimate, imbued with a certain amount of guessing, but I feel confident that the time is not far distant when this record, at least, will stand to the credit of intubation. Then, even more than now, will O'Dwyer's patience and perseverance be appreciated. How many thousands of lives will it have saved!"

BOOKS AND PAMPHLETS RECEIVED.

Mental Epilepsy. By L. W. Baker, M.D.

A Case of Broncho-Pulmonary Mycosis. By Wm. W. Waugh, M.D.

Hand-Book of Pharmacy and Therapeutics. Compiled by James E. Lilly.

Abuse of Alcoholics by the Healthy. By Stanford E. Chaillé, A.M., M.D.

A Contribution to the Pathology of the Cerebellum. By E. C. Sequin, M.D.

Feeding Patients Against the Appetite. By Ephraim Cutler, M.D., M.M.S.

"Renal Colic, Parasitic and Calculus." A Criticism. By J. B. Marion, M.D.

The Treatment of Wounds as Based on Evolutionary Laws. Pitfield Mitchell.

The Mechanism of Indirect Fractures of the Skull. By Charles W. Dulles, M.D.

A Case of Nephrolithotomy During the Fifth Month of Pregnancy. By Louis McLane Tiffany, M.D.

A Review of Twenty-Two Cottage Cases, Occurring in the Women's Hospital, in the Service of Dr. T. Gaillard Thomas. By A. H. Buckmasher, M.D.

Oration Delivered before the Alumni Association of the Medico-Chirurgical College of Philadelphia, on the Evening of Thursday, April 7, 1887, by Dudley Reynolds, A.M., M.D.

On Bacteria in Ice, and their Relations to Disease, with Special Reference to the Ice-Supply of New York City. An Experimental Study from the Laboratory of the Alumni Association of the College of Physicians and Surgeons, New York. By T. Mitchell Prudden, M.D.

The Neurotic. By J. Milner Fothergill, M.D., London.

A Unique Case of Bi-Literal Athetosis. By C. H. Hughes, M.D., St. Louis.

Congenital Occlusion of the Posterior Nares. By Alvin A. Hubbell, M.D.

Progress and Development of Medical Science. By Hunter McGuire, M.D., Richmond, Va.

Cases of Poisoning from the Eating of Dried Beef. By R. Harvey Reed, M.D., Mansfield, O.

Address on State Medicine. Recent Advances in Preventive Medicine. By George H. Rohé, M.D.

Some Practical Reflections on Foreign Bodies in the Ear. By Richard H. Lewis, M.D., Raleigh, N. C.

Importance and Value of Experimental Research. Doctorate Address by N. Senn, M.D., Milwaukee, Wis.

Annual Report of the Special Committee on Surgery, 1886. Transactions of the Texas State Medical Association.

The Relation of the Nervous System to Hæmophilia, Malarial Hæmaturia, etc. Second Paper. By C. H Hughes, M.D.

External Urethrotomy. A Plea for Its Early Performance in Minor Traumatisms of the Urethra. By L. Bolton Bangs, M.D.

The Prevention of Cholera Infantum and Kindred Diseases, and of Poisoning by Cheese, Milk, etc. By Victor C. Vaughn, MD., Ph.D.

Speech of Señor Don Matias Romero, Mexican Minister at Washington, Read on the 65th Anniversary of the Birth of General Ulysses S. Grant.

Results of Clinical Work at the Richmond (Va.) Eye, Ear and Throat Infirmary, with Practical Remarks as to Treatment, Operations, etc., Especially Cataract Extraction. By Joseph A. White, A.M., M.D., Senior Surgeon.

Note on the Treatment of Amenorrhœa with Permanganate of Potash. By Thomas A. Ashby, M.D., Baltimore.

Infant Food and Infant Feeding. By Prof. Edgar Everhart, A.M., Ph.D., Professor of Chemistry University of Texas.

Resident Students of the Charity Hospital of New Orleans, La. Establishment of a Medical Library by the Louisiana State Medical Society. By Joseph Jones, M.D.

READING NOTICES.

H. Hewstead, M.D., Canastota, N. Y. :—"I have used Lactated Food with infants and invalids. There can be but one opinion of the article after a careful trial. Children relish it that cannot be induced to take many of the so-called foods on the market. It certainly supplies a long-felt want for children with weak digestion, system suffering from marasmus and wasting diseases. In many cases where the mother's milk is worse than almost nothing, heartily endorse the Lactated Food."

Irregular Menstruation.—Miss H. had been suffering for years with Irregular Menstruation. Her periods were from five weeks to three months apart, and always attended with a great deal of headache, backache, and, in fact, most of the unpleasantness of menstruation. I had given her nearly everything I could think of, but without effect. Macrotys seemed to alleviate the head and back symptoms to some extent, but that was all. I gave her a bottle of Aletris Cordial one week before the expected period, directing one teaspoonful morning and night. What was my surprise when I found that her periods are just to the minute this month, and so much better in every respect, that she could walk around all day (having before now to keep the bed). I believe that this medicine is going to prove a boon to females suffering with diseases peculiar to them.

Warren, Mich. W. H. Smith, M.D.

NORTH CAROLINA
MEDICAL JOURNAL.

THOMAS F. WOOD, M. D.,
GEO. GILLETT THOMAS, M. D., Editors.

Number 3. Wilmington, September, 1887. Vol. 20

ORIGINAL COMMUNICATIONS.

REMARKS ON THE NATURE AND TREATMENT OF SO-CALLED PUERPERAL FEVER.

By William C. Dabney, M.D., Professor of Obstetrics and Practice of Medicine in the University of Virginia.

In a few remarks which I had the honor to make at the last meeting of the North Carolina Medical Society, I endeavored to show that under the old name, "Puerperal Fever," there were included two distinct affections, presenting a great similarity in their symptoms, but differing widely in their nature and results and somewhat in their treatment.

I wish to present now to the readers of the North Carolina Medical Journal my reasons for the opinions then expressed.

I hope it will not be thought, however, that I consider these views new or original, but it seems to me they are extremely important from a practical point of view, and that they have not generally received the attention which they deserve.

The view commonly entertained now is that puerperal fever is puerperal septicæmia (Lusk), and this is doubtless the truth, but it is not the *whole* truth.

Barnes lays great stress upon the fact that puerperal fever may be either *auto*-genitic, that is, the poison may be developed *within* the body of the woman, or *hetero*-genitic when it is introduced from *without.*

In 1879 a committee was appointed by the Pathological Society of London to report on the nature of septicæmia, pyæmia and allied diseases. Mr. Marcus Beck was the chairman of this committee, and its report was published in the "Report of the Local Government Board" for the following year. This report, which was a most admirable one, related to *surgical* septicæmia, but I think I can show how exactly their conclusions apply to that affection, or rather, to those affections which have been called puerperal fever.

This committee stated that there were two diseases commonly included under the name septicæmia, one they called septic *intoxication*, the other septic *infection.*

The *first*, septic *intoxication*, was due to the absorption of decomposing, or, as they termed it, septic matter; it corresponds exactly with the *auto*-genitic puerperal fever of Barnes.

The *second*, septic *infection*, was due to the entrance into the circulation of a poison or germ capable of multiplication. This corresponds with the *hetero*-genitic puerperal fever of Barnes.

At the time that this committee reported nothing was known of the alkaloids of decomposition or ptomaines. It is needless to go into any description here of these singular bodies. The investigations of Goutier in Paris, Breiger in Berlin, and others have shown that some of them possess poisonous properties, and Kannel and Laulanié, in a paper read before the French Surgical Congress in 1885, endeavored to show their relation to septicæmia and the circumstances which influence the entrance into the circulation of ptomaines and microbes respectively.

Turning now to the symptoms of septic intoxication and septic infection, we find that in each there is usually a chill, high fever and prostration; but there is this striking *dis*-similarity: in septic *intoxication* as soon as the decomposing matter is removed the symptoms disappear; in septic *infection*, on the other hand, the symptoms continue in spite of the removal of the decomposing matters. Let me introduce here two cases, one surgical, the other obstetrical, in order to illustrate this point :

Case 1.—A little girl twelve years old fell and had her groin pierced by a piece of wood about three-quarters of an inch in diameter; no vessel or nerve of any size was injured, and, after carefully dressing the wound, I drew the edges together as accurately as possible in order to get more prompt union. It was in the earlier days of my professional life and before the days of antiseptic dressings. All went well for 72 hours, when the little girl had a severe chill, which was followed by high fever; the stitches were at once removed, a small quantity of sanious pus escaped, the wound was thoroughly cleansed and the fever disappeared entirely in a few hours.

Case 2.—On December 19th I attended Mrs. P. in her fourth confinement. Her labor was an easy one, and all went well till December 22d, when she had a severe chill, and when I saw her an hour afterwards her temperature was 105; the lochial discharge was rather scant and somewhat offensive. A copious vaginal injection was at once employed, and she was given 20 grains of antipyrin. Within two hours her temperature was 101, and the next day it was normal, and she made an uninterrupted recovery. Such cases have doubtless occurred in the practice of every physician; surely this is not *true* septicæmia.

Now, in each of these cases there was a wounded surface, in each there was retention in contact with that surface of some decomposing animal matter. It is plain, furthermore, that the substance which caused the chill and fever was not one which was capable of multiplication, for if it had been, the germs which had entered the body would have continued to multiply in spite of the cleansing of the wounded surfaces, and the fever and other symptoms would not have disappeared so promptly.

One other point, I think, is pretty well established, namely, that for the development of septic poison (ptomaines ?) germs are necessary. When a wound is thoroughly protected by an antiseptic dressing neither septic injection nor septic intoxication occur, but it is highly probable, if not certain, that the germs of decomposition are *themselves* harmless.

Now let us compare the two cases (especially the second) which have already been described with the following :

Case 3.—On December 15th, 1885, I attended Mrs. W. in labor with her first child. Her pregnancy had been a perfectly natural one, and she was the picture of health. On December 14th her nurse went to see her, *from a case of puerperal pelvic cellulitis*, and bathed her genital organs. Twenty-four hours afterwards her labor commenced with a chill, which was followed by a high fever; the fever continued throughout her labor, which lasted eight hours, and never abated till her death, six days afterwards, in spite of the free use of antipyrin and vaginal injections.

This case was a typical one of puerperal septicæmia or septic infection, running a rather rapid course and terminating fatally. There are several points about this case which illustrate important truths:

(1) The chill and fever commenced *before* her labor, and before, therefore, there were any sources of decomposition or probably any lesions of the mucous membrane.

(The bacteriologists tell us that the rod-shaped bacteria (bacilli) have the power of penetrating animal membranes far more readily than the micrococci or round bacteria. It will be remembered that each of these forms have been found in puerperal septicæmia.)

The germs of puerperal septicæmia, then, do not *require* decomposing animal matter for their development, and may enter the circulation even where no wound exists. Of course there is no *certainty* that there was no solution of continuity of the mucous membrane in this case, but it is generally conceded that such an injury is not absolutely necessary for the entrance of the germs.

(2) The germs in this case must have had the property of multiplication, for the amount of poison (?) originally introduced must have been extremely small, and yet it progressed steadily to a fatal termination, in spite of thorough cleansing with a germicidal solution.

Any physician who will take the trouble to look back over his obstetrical experience will, I am sure, recall many such cases as the second, and some, I fear, like the third, which I have mentioned.

Having considered the *nature* of so-called puerperal fever, we have to study, in the second place, the treatment of each of the two diseases which have been very briefly described.

I shall not attempt to present what seems to me the appropriate treatment in *detail*, but shall mention only the principles which should guide us in the management of each class of cases. It will be best, of course, to consider them separately:

1. *Puerperal toxæmia*, far more common, and, fortunately, far less serious than puerperal septicæmia, usually yields readily to treatment when it occurs, and can generally be prevented by proper precautions. What, then, in the first place, should the *prevention* treatment of puerperal toxæmia be? We have seen that the septic poison (not germs) is only developed when the germs of decomposition are present. Two things, then, are necessary for the development of septic poison: (1) The germs of decomposition. (2) Some substance suitably situated for undergoing decomposition.

Now, it is possible theoretically to prevent puerperal septic *intoxication* either by (1) preventing the access of germs to the genital canal, or (2), by removing any substance there which is liable to undergo decomposition.

As a matter of fact, both means are resorted to in practice, but by far the most simple and generally applicable is the removal of substances liable to decomposition by syringing out the vagina. Nor is this necessary in every case: it is only when the fetid character of the lochia gives evidence that something has been retained and is undergoing decomposition that injections are necessary. The fluid used in these injections should of course be germicidal in character, because it will destroy the germs of decomposition, and furthermore it may destroy any germ of genuine septicæmia which may be lurking there.

Thorough cleansing is absolutely essential, for as long as decomposing substances remain in the genital canal fresh ptomaines (?) will be found and a dangerous and even fatal fever may result. I have just said that the injections in puerperal toxæmia should be germicidal in character, but in pure toxæmia this is not *essential*, for the germs of decomposition are in themselves harmless.

2. *Puerperal Septicæmia.*—When we come now to consider *puerperal septicæmia*, however, it is manifest that, while the cleansing of the genital canal is useful and proper, because decomposing matter furnishes a very suitable soil for the development of septic germs, it is of infinitely more importance to prevent the access of these germs to the genital canal when they may gain access to the system and then multiply.

What means, then, should we adopt to prevent the access of dust germs, which always come from without? Antiseptic precautions furnish the only real safeguard, and while Dr. Thomas's method may seem needlessly thorough, there can be no doubt of its efficacy and the propriety of its adoption in *hospital practice* or in the *crowded cities*, especially when septic diseases are prevailing. In the New York Maternity, for example, the mortality has been reduced to less than 1 per cent. since the antiseptic method was introduced, while it ranged before between 2.36 and 8.69 per cent.

I have said that these precautions are requisite in hospitals and in crowded cities, but to what extent, it may be asked, should they be adopted in private practice in the country or in small towns? Certainly the frequent antiseptic injections and the antiseptic pad are not called for here as a rule. Thorough cleanliness, first on the part of the physician and nurse, and secondly on the part of the patient, is necessary in all cases. Furthermore, it is well for the physician to use on his hands an antiseptic solution (which he can always take with him) before making a vaginal examination. The extension of the placenta by Credé's method is desirable, and vaginal examinations after the labor is over should be avoided as far as possible.

The following conclusions seem to me to be warranted:

1. Two different diseases are commonly included under the name "puerperal fever." One is puerperal *toxæmia* or puerperal septic intoxication (*auto*-infection), and the other is puerperal *septicæmia* or puerperal septic infection (*hetero*-infection).

2. Puerperal toxæmia is due to the absorption of certain products of decomposition of animal substances, which are not self-multiplying, and which are probably produced by the action of germs which are themselves harmless.

3. Puerperal septicæmia is due to the entrance into the circulation of *specific, septic* germs which are capable of producing other germs similar to themselves and which are *directly* injurious to the human body.

4. The removal from the genital canal of all substances which are undergoing decomposition will prevent toxæmia, and will exert a certain effect on this disease after it has developed.

5. The removal from the genital canal of substances which are undergoing decomposition will *not* prevent the occurrence of puer-

peral *septicæmia*, but will remove one of the conditions favorable to the development of the germs of this disease.

6. The only safeguard against puerperal septicæmia is the use of strict antiseptic precautions throughout the labor and subsequently.

7. Injections to remove decomposing substances from the genital canal should in all cases be antiseptic in character, because it is impossible in the early stages to diagnose puerperal *toxæmia* from puerperal *septicæmia*.

TINNITUS AURIUM.

By John Herbert Claiborne, Jr., M.D., Instructor in Ophthalmology in the New York Polyclinic; Atttending Surgeon to the North-Western Dispensary, Eye, Ear and Throat Department; Assistant Surgeon to the Eye and Ear Out-Door Department, Bellevue; Clinical Assistant to the Vanderbilt Clinic, New York.

Perhaps there is no greater opprobrium to aural surgery than the frequent failure to relieve that most annoying and distressing symptom, Tinnitus Aurium.

It is a subjective symptom due to an irritation, in whatever way, of the special nerve of hearing. It usually accompanies deafness, of greater or less degree, and an enumeration of the causes of deafness would be an enumeration of the causes of tinnitus aurium.

It is our purpose to give only an outline of the conditions which may give rise to this symptom. The treatment which we shall suggest for it will also be the treatment for the attending deafness.

The noises are variously described by patients, as whizzing, popping, crackling, cracking, sizzing, roaring, etc., high-pitched and low-pitched noises, of great or little intensity. The prognosis with reference to this symptom depends entirely upon the recognition of its cause.

Let us start from without and review the conditions in the external auditory canal that may cause subjective noises in the ears. It is a well-known fact that foreign bodies of various descriptions find their way into the external auditory canal, either by accident or through the exploration of the outer ear, by sundry domestic articles—peas, beans, grains of wheat, of oats, sand, grits, pieces of hairpins, of tooth-picks, etc.—anything which human ingenuity can thrust into the canal to relieve the tickling sensation which is often felt there. All of these things, either by lying upon the drum, interfering with the atmospheric pressure, or by setting up an inflammation, may cause tinnitus. Parasites of various descriptions find their way into the canal, and by lying against, or crawling over the drum, give rise not only to great tinnitus, but also to extreme pain. The growth of certain fungi in this region, particularly on the drum, may cause tinnitus by the inflammation which they set up; among these are chiefly found the non-pathogenic fungi, the aspergillus niger, albus and the mucor mucedo. Instances are not lacking in which hair in the canal, growing towards the drum, may, by scratching against it, cause unbearable tinnitus.

One of the most fruitful sources of tinnitus is the accumulation of hardened or soft wax in the canal, lying upon the drum and interfering with the atmospheric pressure. Mingled with the wax, or even alone, may be found hardened and lumped epithelial scales. Tumors of the external auditory canal, of whatever nature, may, by setting up an inflammation of the part, pressing upon the drum, or interfering with the atmospheric pressure, cause subjective noises.

The tinnitus is increased through the injury often done the parts by exploration of the region with hairpins, tooth-picks, and, above all, by that most vicious and destructive instrument, "sold by all druggists," the "ear-cleaner." If there be any foreign substance or wax in the canal, the buyer, confident in the efficacy of the newly acquired "cleaner," rams, as with a rod, the charge down upon the drum, not only causing direct pressure upon it, but at times setting up a myringitis which may end in purulent middle ear catarrh, or else cause atrophy of the membrana tympani.

In passing from the external auditory canal we pass more or less out of the scope of the general practitioner; an average skill in manipulation, however, coupled with a comparatively extensive knowledge of ear diseases will enable one to entertain at least a reasonable suspicion of the cause of the tinnitus. As regards the drum itself, the following conditions may be enumerated as the chief causes of this symptom : Simple myringitis, inflammation of all the tissues of the membrana tympani; epithelial or pus-like tumours, situated on the cutaneous surface; cholesterine tumours; the fracture of the handle of the malleus; rupture of the membrana tympani from any cause; abscesses in the layers of the drum.

The middle ear may be the seat of an inflammation that causes tinnitus, or this may be combined with simple myringitis. The inflammation may be serous, sero-fibrinous or purulent, in which latter case there is, sooner or later, perforation of the drum; caries of the ossicula or adjacent walls, the former usually accompanied by perforation in Shrapnell's membrane, cholesterine tumours, etc.

The cause may lie in the throat (pharynx or naso-pharynx); catarrh of the Eustachian tube, propagated from the throat, the closure, partial or complete, of the ostium tubæ by inflammatory processes, or their results in the neighboring parts; eminently from adenoid vegetations in the naso-pharynx—polypoid growths on the third or pharyngeal tonsil. In such cases the tinnitus is obviously due to the fact that the atmospheric pressure is rendered unequal, in consequence of which the drum is driven inward by the pressure of the air through the external auditory canal. There are certain other conditions, rare, of which it is necessary only to make mention, membranous or diphtheritic inflammation of the middle ear, propagated from the throat. Before we proceed to the consideration of the internal ear let us review two causes of tinnitus, frequent causes, indeed, and simply functional ones. They are, on the one hand, general anæmia, on the other cerebral hyperæmia. The first is attended by the symptoms of general anæmia more or less marked—palpitation of the heart, shortness of breath in exercise, sense of uneasiness, malaise, etc.; objectively, an even palor of the general cutaneous surfaces, marked palor of the conjunctional sac, the vermilion border of the lips and the inner surface of the lips. If the patients are good observers they will perhaps tell the surgeon that the noises are improved by the drinking of any stimulant or after a full meal. We have in mind a recent case of a young woman who presented all the symptoms and signs of anæmia, save that she had a beautiful color in her cheeks, and who remarked to us, without inquiry on our part, that the noises ceased when she pressed her fingers against the side of her neck. We immediately took her by the nape of the neck and pushed her head to a level with her knees. She said the noises ceased immediately. In these cases the anæmic susurrus transmitted from the heart can be heard in the great vessels of the neck. The membrana tympani may be normal in appearance and the Eustachian tube be free and open. There may be no or very little lowering of the power of hearing. In these cases the treatment is most satisfactory and brilliant. On general principles, if the noises cease when the head is lowered or pressure is made over the carotids, or if they are lowered by the taking of stimulants while the symptoms and signs of anæmia are present, the diagnosis can be made with a great degree of certainty and a favorable prognosis with an equal degree. When tinnitus is due to cerebral hyperæmia the signs and symptoms present will point to the cause. These it is not our purpose to enumerate. Suffice it to say, exercise or excitement of any description will increase the noises, also lowering of the head or pressure over the carotid region. Rest, quiet and the erect position lessen them. In either case the condition of the external auditory canal, the throat, Eustachian tube and middle ear should be determined, for there might be conditions in these parts which increase the tinnitus, or in any given case of cerebral hyperæmia or general anæmia there might be tinnitus aurium which is not due to the anæmia or hyperæmia, since these conditions are not always attended by this symptom. When anæmia or cerebral hyperæmia are attended by tinnitus aurium it is probably due to a lack of equalization of the blood pressure in the ramifications of the auditory artery in the various apartments of the internal ear. These we must regard as mere functional modifications, and are, as we have stated, amenable to treatment; when, however, there are organic changes in this part, the tinnitus is constant and incurable.

The so-called Paracusis Willissi, that form of deafness in which hearing is better in noisy places, is usually accompanied by persistent and incurable tinnitus.

In Menières disease, the pathogenesis of which has not yet been definitely settled, the tinnitus is often most distressing, and the prognosis both for the life and hearing is unfavorable. The other symptoms attending this disease may enable the physician to arrive at a fitting diagnosis and prognosis, but it should not be forgotten that there are undoubtedly many conditions of functional disturbance of the organ of hearing that stimulate Menières disease.

Careful consideration and an intelligent system of therapy will reduce the chances of mistaking the diagnosis to the minimum. The deafness of boiler-makers which is accompanied by distressing tinnitus is rarely relieved unless treatment is instituted in the beginning and the occupation is changed. The prognosis for the power of hearing is likewise unfavorable in these cases. The continuous hammering of the artisans at work first increases, then exhausts the irritability of the auditory nerve, and we have no reason to assume that ultimately organic changes are not induced.

Proper treatment must be based upon a thorough appreciation of the cause. In many cases, this having been recognized, the symptom can be relieved. In the first place, the external auditory canal should be examined with the aural speculum and a head or hand mirror. If there be any foreign matter of any description, wax or hardened epithelium scales, they should be removed by *syringing* with warm water, or with a weak warm solution of the carbonate of soda in case of wax or epithelial scales.

Under no circumstances should a probe be used, either as a means of treatment or of diagnosis, unless, perhaps, in the hands of a consummate expert. In case the tinnitus be due to one of these obstructions, it will probably cease immediately after they are removed. At times some slight noises remain, but usually pass away in a day or two. It is possible for the pressure of the foreign bodies to cause a myringitis, or this with middle ear inflammation. Such events should be met in a manner presently to be described. If simple myryngitis has been caused, it is best to do nothing, save to put a plug of cotton in the ear to prevent the entrance of dust and cold. The instillation of warm solutions, oils, glycerine, etc., should be discountenanced, as they tend mostly to macerate the drum and increase its hyperæmia. In case the noises continue persistently after the removal of obstructions, together with pain, throbbing, etc., the middle ear has probably become involved. At this point it were well for the physician to be an aurist. At the hands of an inexpert the *noli me tangere* treatment is best—protect the ear by exclusion of air, by heat, general measures, derivation, etc.

When tinnitus is due to catarrhal middle ear inflammation, uncomplicated by myringitis, its treatment can be made brilliant and effective. It is usually accompanied by external inflammation in other parts of the body, particularly the upper respiratory tract. As general measures, systemic derivation, preferably by a saline purge, diaphoresis by Dover's powder, hot foot-bath at night, etc., or by a Russian or Turkish bath, though when the two latter are employed great care should be observed lest fresh cold be taken. The pharynx should be treated with gargles, spray, etc. The nasal passages should be cleansed and kept free of clogged secretions, not by syringing or snuffing up of water, but by *pouring* warm water or warm antiseptic solutions into the anterior nares. But above all, the main reliance is upon the inflation of the middle ear. This may be done imperfectly by the Politzer bag, but strict reliance can be put only upon the Eustachian catheter and continuous inflation through it for thirty seconds or a minute. We have seen the disagreeable symptoms of many cases of acute middle ear catarrh or catarrhus tubæ relieved by *one* inflation of one or two minutes. Tinnitus from these causes is particularly common in the bathing season of the summer months. In cases of this nature there is often fluid in the middle ear. When by inflation fluid is discovered and the noises are not relieved by several inflations, paracentesis of the drum is indicated. This may be repeated a number of times. After each paracentesis it is well to inflate. If the tinnitus be due to subacute inflammation of the part where there is stringy, sticky, fibrinous exudation, paracentesis combined with syringing of the middle ear through the Eustachian catheter, introduced in the Eustachian tube, will alone relieve the noises.

In the tinnitus of chronic middle ear catarrh inflation seems to be the only hope. In these cases there is no exudation, but a general sclerosis of the soft parts, with, at times, anchylosis of the ossicula.

We cannot refrain from mentioning in this connection the "pressure probe" of Lucae of Berlin. It is so arranged that pressure can be made and relieved alternately over the short process of the hammer. The instrument consists of a shank let into a barrel; by slight pressure the shank sinks into the barrel, offering a constant pressure. The drum having been illuminated, the cap of the probe is fitted over the short process and pressure is made and relieved eight or ten times successively. This is repeated on alternate days; no more pressure should be made than is given by the shank sinking into the barrel.

The instrument may be substituted by the thumb or index finger, placed over the tragus. By pushing the latter over the meatus and alternately making and relieving pressure with the finger, the drum and ossicula may be given a certain amount of exercise.

Several years ago inhalations of the nitrite of amyl were employed to relieve tinnitus in cases of chronic middle ear catarrh. A number of cases were reported in which it was claimed benefit had been obtained—in fact, that many had been entirely relieved. The test of further experience, however, caused a waning in the popularity of this method of treatment. We have seen it tried in a number of cases, but without any marked or certain benefits. On the whole, tinnitus attending chronic sclerosing middle ear catarrh, the main reliance is on the inflation of the middle ear, preferably by the Eustachian catheter, and the treatment of the upper air passages.

When tinnitus aurium is due to labarynthine disease, surgical procedures are at a stand-still. Charcot claims to cure Menières disease and its attendant unpleasant symptoms with quinine. With this we have no experience. In this disease the hypodermic injection of pilocarpine has been employed without much effect. The tinnitus of boiler-makers is irremediable except, perhaps, by prophylaxis. If the symptom proceeds from any surgical disease of the bone, operative measures are, of course, indicated.

130 Lexington Avenue, N. Y.

EIGHT SUCCESSIVE CASES OF GASTRO INTESTINAL AFFECTIONS OF INFANCY AND CHILDHOOD TREATED BY RECTAL INJECTIONS OF ICE-WATER AND SALOL (SALYCILATE OF PHENOL).

By W. B. Pritchard, M.D., of New York City.

Case 1.—Mary M., aged 1 year and 7 months, well developed and of healthy parentage. Was called to the case July 2, 10 A. M. The mother gave a history of vomiting and diarrhœa, beginning early on the morning of the previous day. I found the child unable to retain anything, very fretful and restless, especially at night, jerking its head from side to side, and with a twitching of the tendons of the forearm, indicating threatened convulsions. Heat of surface and head quite considerable. Axillary temperature 101°.

Dejecta from bowels profuse, frequent and watery, containing curdled milk, and giving an acid reaction with litmus paper. Ordered,

℞.—Bismuth. subnit .... ʒ iij.
Cerii oxalat.................................gr xv
Sodæ bicarb................................ ʒ ss
Ft. pulveres 1.

Sig: To be mixed with a cupful of milk, of which a teaspoonful was to be given every half hour until vomiting should be relieved. Gave an injection of ice-water (tea-cupful), which was retained ten minutes. Ordered,

℞.—Salol.....................................gr. x.
Ft. pulveres 10.

Sig: One powder every two hours. Directed the mother to give child no nourishment till evening. For relief of thirst, which was very great, I ordered powdered salp (half teaspoonful to a cup of water) given as occasion demanded. Salp is a mucilaginous powder, with some slight nutritive properties, and is substituted for acacia, boiled water, etc.

6 P. M.—Child sleeping quietly—a little fretful when aroused, but much brighter and less haggard than in the forenoon. Vomiting has stopped entirely—only two actions since morning injection. Temperature apparently normal, though no thermometrical observation was made. Ordered a turpentine stupe over abdomen, which was a little tender, and continued the directions of the morning. Directed the mother to begin the use of Horlick's Malted Milk Food, a new preparation, which does not require the addition of any milk for use, and the consequent possible introduction into the system of tyrotoxicon or other poisonous ptomaines of milk fermentation.

July 3d, 10 : 30 A. M.—Child much better. Temperature normal, expression natural. Two small actions since last visit. No return of vomiting. Ravenously hungry, and only fretful when denied food. Ordered bismuth preparation discontinued. Salol every four hours through next day. *Salp*-water as a drink to be continued, and child to be fed on Horlick's food for at least ten days, and allowed plenty of fresh air and out-door life. Inquiry at the end of a week resulted in the statement that the child had made complete recovery.

Case 2.—Johnnie S., aged 11 months. Called to the child July 3d, 12 : 30 P. M., for the relief of convulsions. Found the child in the midst of a severe clonic convulsion, with great heat of head and cold extremities. Administered chloroform by inhalation with almost immediate relief. Child had been suffering from diarrhœa, with vomiting occasionally, for three days previous to attack of convulsion. There had been no action from the bowels in nearly twenty-four hours, howver, the result of half a teaspoonful of paregoric given by the mother on the morning of July 2d. The abdomen was considerably enlarged and hard to the feel of the fingers. I ordered a dose of castor oil, to be followed in one hour by an enema of warm water and gruel, and prescribed,

℞.—Pot. bromid........ .... ʒ i
Chloral hydrate............................gr xx
Aquæ ad.................................. ℥ ij

Sig: Teaspoonful every three or four hours, or oftener, if convulsions are threatened again.

5 P. M.—Found child better, but drowsy; temperature nearly normal. Bowels had acted four times since noon, and last action was slightly streaked with blood. Gave an injection of ice-water (cupful) and ordered complete abstinence from food for 10 hours, with salp-water to relieve thirst as before, and salol in doses of 1 gr. every three hours.

9 A. M., July 4th.—Child had slept well all night. There had been two small actions from bowels since last visit, free from blood, however. Temperature normal; abdomen reduced in size and soft and yielding. Discontinued bromide mixture and ordered Malted Milk Food; salol powder to be given every four hours.

5 P. M.—Child bright and playful; temperature normal; one action since morning; no nausea, and child takes food with relish—case discharged.

Case 3.—W. M., aged 2 years. Case brought to my office on the morning of July 3d, with a history of diarrhœa and occasional vomiting for several days. The mother had given the child a dose of castor oil two days previously, which had a temporarily beneficial effect, but the symptoms had returned in rather an aggravated form the next day and had persisted. Child vomited and passed loose liquid feces while under observation in the office. Gave an ice-water injection of nearly half pint and ordered bismuth and oxalate of cerium mixture in milk to relieve vomiting, and salol in doses of 1½ grs. every 2 hours.

6 P. M.—Found child relieved of vomiting. No action from the bowels since the morning injections until 5 o'clock, since which time there had been two watery discharges. Repeated the injection of ice-water, using a cupful, which was retained. Discontinued bismuth mixture and ordered salol every three hours. Directed the mother to feed the child on milk pancreatized by the addition of Fairchild's and Foster's extractum pancreates.

11 A. M. July 4th.—Child running about the room playing after having passed a comfortable night. One slight action since last injection, healthy in appearance and consistency. Directed the mother to continue the salol two or three times daily for two or three days before eating, and discharged the case.

Case 4.—Willie C., aged 1 year and 6 months. Was called to the case July 5th, 7 P. M. The mother gave a history of diarrhœa which had continued for three days, beginning with loose greenish evacuations, very offensive in odor, and occurring four or five times during the 24 hours. Had noticed that there were traces of blood and tenesmus on the third day (July 5th), and vomiting had set in almost immediately. The child had a very much enlarged and tender abdomen, was fretful, and had considerable fever. I gave an ice-water injection at once, and prescribed foı the relief of vomiting the mixture of bismuth, oxalate of cerium and bicarbonate of soda in milk, as in cases 1 and 3. Ordered,

℞.—Salol.................................. gr xv
Ft. pulv. 10.

Sig: One powder every 2 hours. Directed the mother to put turpentine stupe over abdomen (first greasing cloth with some animal oil), and to sponge off the limbs and face with cold water occasionally.

9 A. M., July 6th —Patient entirely relieved of vomiting, but the diarrhœa persisting (free from blood, however), I gave another ice-water injection, and ornered the salol powder every hour. (I should have mentioned the fact that the mother had given the child a dose of castor oil early in the attack.) The bismuth mixture was discontinued with directions to resort again to its use should vomiting

recur. Child had been allowed nothing to eat in 12 hours. I directed the mother to commence the Malted Milk Food. Thirst was relieved with pounded ice in a cloth, which the child was allowed to hold in its mouth frequently.

July 6th, 8 P. M.—I found the child very much better. Normal temperature, no vomiting, no tenderness over abdomen, and the diarrhœa had not recurred.

July 7th, 10 A. M.—Patient still improving, bright and playful, and with no return of symptoms. Only one action from bowels since last injection, nearly 24 hours previously. Directed the mother to continue the salol three or four times a day for two or three days, allowing no other food but Malted Milk preparation for at least one week, and discharged the case.

Case 5.—This was a case of simple fermentative diarrhœa, characterized by loose, watery actions, pale in color, occurring every hour or two in a child 2 years old. No vomiting, no abdominal tenderness. Slight nausea and some slight febrile symptoms. Ordered a dose of castor oil, (dessert spoonful) to be given with five drops of paregoric, and to be followed at once by salol in doses of one grain and a half. The mother reported the child as well the next evening.

Case 6.—Willie J., aged 7 months, a symmetrically developed, well nourished child, with a history of good health from birth to present attacks, though the mother has been a sufferer for years from congestion of spinal cord, and reflex nervous trouble, and the father had died of meningitis only a few weeks before the child's birth. I was called to the child July 7th, 10 A. M., to treat it for an attack which I diagnosed as threatened cholera-infantum, as manifested by frequent attacks of vomiting and diarrhœa simultaneously, a thin rice-water discharge characterizing the evacuations from bowels. As the child's appearance indicated a general congestive tendency, with great heat of surface, I saw no indications for the use of stimulants. Gave an injection of ice-water (half a pint), and prescribed for the relief of vomiting the bismuth mixture (for formula see Case 1). Ordered salol in doses of $\frac{3}{4}$ gr. every hour, and directed the mother to repeat the ice-water injection if there was any return of the diarrhœa. For the relief of thirst I advised the use of pounded ice in a cloth, which the child was allowed to hold in its mouth occasionally.

Called again at 5 P. M., and found very little change in child's condition so far as appearance is concerned. The vomiting, however, and diarrhœa had ceased almost entirely, there having been but one attack of vomiting and two actions from bowels since morning. Surface cool and covered with a "gentle perspiration." Child presented the appearance of considerable exhaustion. Ordered brandy (burnt) in three drop doses, with a little water, slightly sweetened, every two hours, and placed the child on milk, to which I added :

℞.—Ext. pancreatis.. .... gr v
Sodæ bicarb.............................. gr xv
Ft. pulv. 1.

Sig : One powder to pint of milk, to be heated to a temperature of 98° or 100° for 15 or 20 minutes, and then set on ice and used in small quantities every two hours. Continued the treatment and directions of the morning.

July 8th, 11 : 30, A. M.—Child apparently very much the same; no return of vomiting, but the diarrhœa persists and the character of the evacuations continues the same, loose, watery and containing undigested milk. Repeated the injection of ice-water and prescribed for relief of restlessness and fretfulness,

℞.—Pot. bromid.......................... gr xlviij
Aquæ................................ ℥ ij
Sig : Teaspoonful every 3 hours.

July 8, 7 P. M.—No perceptible change in child's condition; evacuations from bowels similar in character and frequency to those of day before; no return of vomiting, but an evident aversion to the milk. Ordered diet changed to Malted Milk Food and directed the mother to continue the directions of the morning. After personally repeating the injection of ice-water.

July 9, 4 P. M.—Patient much brighter and less fretful, but will not take the Malted Milk Food except when forced by extreme thirst to take some liquid for its relief. Four evacuations from bowels since last visit, nearly twenty-four hours. No return of vomiting. I again gave an ice-water injection and ordered the continuation of the previously given directions.

July 10, 5 P. M.—Child really better; sleeping quietly after having made a hearty dinner of *condensed milk*, which the mother had taken the liberty of substituting for Malted Milk Food, which the child refused to take persistently. Condensed milk had been the child's diet since birth, which is a possible solution of its strangely happy effect in this case. Convalescence was rapid henceforth, and with occasional doses of salol and syrup iodide of iron in four drop doses *ter in die*, the child at the end of a week was apparently restored to perfect health.

Case 8.—Mary M., aged 14 months. Was seen at my office on the morning of July 8th. The mother stated that the child had been suffering for two days from diarrhœa; eight or ten stools a day, of frothy appearance and sour smell, producing excoriation of the buttocks and anal region to a very uncomfortable extent. This case, I thought, presented an opportunity to contrast the old treatment with that of ice-water injections and salol, and I therefore ordered,

℞.—Bismuth. subnit	ʒ jss
Mucil. acaciæ	℥ j
Cretæ prep	ʒ iij
Aquæ ad	℥ iv

Sig: Teaspoonful every 2 hours, with directions to add from 3 to 5 drops of paregoric to each dose, if the diarrhœa was not controlled after the administration of three or four doses of the above mixture. I gave the child a full teaspoonful of castor oil at the office. I directed the mother to feed the child on boiled milk with lime water. There was no history of vomiting in this case, and no evidence of febrile excitement. I did not hear from the case again until July 13th, when the mother called at the office again, but without the child, which, she said, was again affected with the diarrhœa, and that its condition was aggravated by the presence of a persistent nausea and vomiting, with fever and restlessness to quite a considerable degree. The child, she said, had improved at once after taking the medicine prescribed at a former call, and had, she thought, entirely recovered, but there had been a return of the symptoms, not superinduced by any error of diet, the day previous, and it appeared to be very much worse than at first. I called in at 10 A. M., and found the child's condition just as described by the mother—fretful, peevish, consumed apparently with an intense thirst, which the parents, however, made no attempt to appease, as water was rejected immediately upon being swallowed. I made careful inquiry to elicit, if possible, some tangible cause for the apparent relapse, but without avail. The child had been fed upon the boiled milk, with lime water, and had been given nothing else. I ordered bicarbonate of soda and peppermint water for the relief of vomiting, and gave the child small quantities of pounded ice for the relief of thirst, and administered an injection of half-pint of ice-water. I prescribed,

℞.—Salol .... gr x
Ft. pulv. 10.

Sig: One powder every two hours. I then left, ordering the injection to be repeated if diarrhœa persisted, and promising to call in the evening.

July 13th, 9 P. M.—Ice-water injections had been given at 1 o'clock and again at 5 P. M.; no stool since last injection. Had vomited twice since morning. Had rested quietly for an hour or two after each injection, after which interval the former restlessness and fretfulness returned. The child was sleeping quietly and respiration and temperature seemed normal. I ordered the directions of the morning continued, and directed the mother to give the child no milk, but feed it entirely upon Malted Milk Food.

July 14th, 10 A. M.—Child had spent rather a restless, wakeful night, but seemed brighter, and there had been no vomiting since 5 P. M. of the day previous. Diarrhœa still persistent and character of evacuations unchanged in appearance, though less profuse in quantity. The Malted Milk Food had been retained—it had been taken twice—and its administration had been attended with no nausea or symptoms of discomfort. I gave another injection of ice-water, ordered the salol continued, and directed the mother to give the child 5 or 10 drops of good whiskey every three or four hours in a little sweetened water.

July 14th, 8 P. M.—Child much brighter and every indication from appearance of decided improvement. Had slept two or three hours during the day and had manifested no symptoms of thirst or discomfort in any way. Two small, dark, semi-solid evacuations since morning. Temperature and pulse normal. Ordered salol powders to be given every four hours instead of every two, and to be continued for several days during convalescence, and the child to have no other food than that prescribed for five or six days. Did not see the child any more, but was told by the mother, who called at the office to consult me personally some ten days or two weeks afterwards, that the child had made a perfect recovery.

Case 8.—Willie C., aged 18 months. A small, pale, delicate-looking child, of healthy parentage, however, but living amid physical surroundings representing bad hygiene in an aggravated form. I was called to treat it for diarrhœa and vomiting. Saw the patient on the morning of July 12. Found him, as described by the mother, affected with persistent vomiting, of sour-smelling greenish matter from stomach, of a watery consistency, and frequent evacuations from the bowels of watery fæces, very similar in appearance to vomited matter. The child had the appearance of approaching collapse, its pale, cadaveric face, with pinched blue features and sunken eyes, indicating an immediate necessity for stimulation. I gave at once 10 drops of good whiskey, with an equal quantity of aromatic spirits of ammonia, which was fortunately retained, and ordered a repetition of the same every three hours. I prescribed,

℞.—Salol.................................... gr x

Ft. pulv. 10.

Sig: One every 2 hours, and gave an injection of warm water ($\frac{1}{2}$ pint, carbolic acid 3 drops) for the purpose of irrigating the bowels and stimulating the patient.

6 P. M.—Child asleep. Mother reports decided improvement during the day; no return of vomiting, and child much stronger and brighter. On awakening the child almost immediately passed a loose stool (the fourth since morning), very similar in appearance to those of the forenoon, and was fretful and restless. I gave an injection of ice-water and ordered the directions of the morning continued, with the exception of the stimulant, which I directed the mother to give two or three times daily as long as the child's condition indicated it.

July 15th, 9:30 A. M.—Child had passed a comfortable night, had passed two stools early in the morning, both more natural in appearance than for several days. No return of vomiting and no evidence of fever, and child seemed stronger and brighter, and was clamorous for food, which had been strictly interdicted for twelve hours. It took in my presence half a teaspoonful of pancreatized milk with great relish. No symptoms of nausea or discomfort. I directed the mother to continue the "salol" at intervals of three hours, and to feed the child on Malted Milk Food.

4 P. M.—Child still improving. Had taken and retained food three times since morning unattended with any symptoms of discomfort. Two small semi-solid stools had been passed since morning, both nearly normal in appearance and consistency. I directed the continuance of the salol and milk food for several days, and dismissed the case, charging the mother to give the child plenty of fresh air, to clothe it lightly, to avoid handling or fondling it at all, and to report promptly any return of the symptoms. At the expiration of a week I was notified (by request) by the father that the child was perfectly well.

The principles of inference and deduction, if applied to the above record, leave very little room for comment. The writer does not claim any originality of conception in the treatment outlined in the above cases, but in their application in suitable combinations the remedies and measures advocated above possess, it is claimed, an advantage over any other method of treatment with which the writer is familiar. With one or two exeeptions these cases all admitted of a diagnosis of so-called cholera-infantum, a justly dreaded and comparatively intractable affection of infancy and early childhood. As evidence of the unsatisfactory results of the existing methods of treatment, witness the therapeutic innovations with which the journals are filled with every issue. Dr. Emmet Holt, a justly accredited authority in the treatment of diseases of infancy and childhood, advocates the use of naphthalin and salycilate of soda, with strict prohibition of milk. Dr. Vaughn, of Michigan, follows the doctrines of the Old School except in the case of milk as an article of diet, which he condemns with even more emphasis than Dr. Holt. Resorcin, salycilic acid and iodoform has each its school, but the writer is convinced, from an experience of which the cases tabulated above may be taken as an example, that a fair trial of the measures herein advocated will result in giving them precedence over any others already extant.

243 W. 54th St., New York.

SELECTED PAPERS.

PASTEUR'S ANTI-HYDROPHOBIC INOCULATIONS.

NC MedJ (OS) 20: 159-166, #3, Sept 1887.

[We give our readers a criticism of the report of the British committee on the prophylactic inoculations of Pasteur against hydrophobia, as it is clearly stated and must carry weight with it. With the two examples of prophylactic inoculations—anti-smallpox inoculation and vaccination—two methods which were at their earliest introduction susceptible of demonstration and of being formulated in such distinct proposition that the items of exception were but explanatory. Will the world accept now a method of prophylactic inoculation which is so involved as that of Pasteur until all that is true in it has been crystalized and all the supernatant liquid drained away? When the old inoculations and the new are compared, will not the public be slow to adopt the new when it requires the skill of its discoverer or specially trained men to keep up with the details and the bill of exceptions? If Pasteur has made a genuine discovery he made a fatal mistake in promulgating it to the world until he was able to follow the memorable example of Jenner and give his discovery forth in lucid demonstrations such as have made the "Inquiry into the Causes of Variolæ Vaccinæ" a model for all investigators.—Eds.]

(From the *Medical Register.*)

"A CRITICISM ON THE REPORT OF THE ENGLISH COMMISSION ON THE PASTEUR METHOD, BY TH M. DOLAN, M.D., F.R.C.S.

"The report of a commission, constituted as the English Hydrophobia Commission was, cannot fail to command the attention of the profession. It seemed to unite all those elements required to give security that the work be honestly and thoroughly done. The erudition of Sir James Paget, the conscientious accuracy of Lauder Brunton, the ripe experience of Sir Joseph Lister, the chemical skill of Sir W. Roscoe, were brought to the assistance of the two men who, we presume, were more immediately concerned with the experimental part of the research, and whose past work certainly qualified them to undertake the laborious investigations necessary to the full elucidation of the problem opened out by Pasteur. In Victor

Horsley and Mr. Fleming the Commission had two men of the first rank, the former bringing to bear skill in modern scientific expert methods, the latter the ripe experience on rabies, which has made for him a world-wide reputation as an authority on this fatal malady. We have waited with some expectation for this report, and we are enabled to congratulate the Commission, constituted as it was, on the manner in which they have done their work. It is just such a report as we anticipated they would publish. There were certain personal difficulties in the way of the investigations, against which the committee tried to guard themselves, not very successfully freeing themselves from this personal equation. Pasteur's great name of itself carried weight with them; his previous researches commanded almost faith. The committee have evidently labored under this hero-worship. Hence the report lacks the thorough analytical character which would have been given were the committee dealing with a less-known man. The gods do not blame the gods; it is for the mortals to criticise and pick holes in the garb of the celestials. Irreverence and want of respect for medical authority are failings to which we confess we are liable, so that, as we have treated M. Pasteur with freedom, we shall not be expected to have much more respect for the annotators: finding fault where fault can be legitimately found with their reasoning, and giving credit where credit is due. Pasteur's work divides itself into two parts, which have to be considered separately :

"(1) The first question is purely experimental. Can dogs be rendered insusceptible against rabies by preventive inoculation? As a laboratory experiment, Pasteur has succeeded in making a certain number of dogs insusceptible. We believe this is beyond dispute. This laboratory experiment has no practical value, so far as being generally applicable, as it would not hold good for all dogs, and even if it did, there are certain other difficulties to be overcome before it could be put into general practice, so that we may then fairly say it has no practical value. It had, however, an experimental value; it induced Pasteur to try preventive inoculation for human beings. The Hydrophobia Commission first devoted itself to the experimental part, and have proved by experiment that M. Pasteur does produce rabies artificially, and the experimenter further succeeded in making a certain number of animals immune against rabies; that is to say, the animals so injected do not die after exposure to rabies, though certain other animals not protected succumbed. So far the Commission have sailed on plain ground. They differ from some continental observers in the results of their experiments, but experiments will differ, as we know but too well. Mr. Horsley's experiments were not very numerous, and certainly will not satisfy continental experimenters like Frisch, Abreu, De Renzi, Amoroso, etc. He experimented on *six dogs*, which he rendered immune. The six dogs were treated *à la Pasteur*, and then *two* dogs and some unprotected rabbits were bitten by dogs or cats that were rabid; the unprotected animals died, the six dogs survived. Mr. Horsley would appear to be solely responsible for the experiments, Mr. Fleming, no doubt, satisfying himself as to the existence of rabies; the other members of the committee in this part of the inquiry were necessarily guided by their experimentalist. Hence, though this report is indorsed by the Commissioners, we may take it that this is Mr. Horsley's work.

"(2) Now the second part relates to a question which comes within the region of logic, and to which we can apply the ordinary rules of evidence. The second part of this problem does not follow as a corollary from the first proposition; it has in reality no relation to it. Because in a certain number of cases M. Pasteur rendered a certain number of dogs immune to artificially induced rabies, it does not follow that he could, after a bite, give similar protection to human beings. If M. Pasteur treated a certain number of human beings in the same manner as he treated his dogs, and then allowed them to be bitten, the experiments would be on a par. *A priori* reasoning from one class to another class of experiments is not logical. Pasteur's success with one class of experiments, however, entitled him to a hearing with another class. The second part of the question, though in the domain of logic, and though depending for its solution on the interpretation of statistics, is yet not so easy to solve, the evidence is so frequently negative, the data varying. Briefly speaking, some 3,000 have gone to Pasteur and been inoculated, these people having been bitten or licked by dogs. Pasteur's school claimed that almost all these people had been saved from death from hydrophobia; *a reductio ad absurdum*. Roughly, the percentage of those who did not develop hydrophobia after the inoculation is small, and, looked at by percentages, the results are most striking. Here is the weak part in the chain of evidence.

The committee themselves have pierced a very formidable hole in the method; in fact, they have dealt a blow at the system, perhaps the most severe that has yet been struck. Various percentages have been fixed on the proportion of rabies to bites. In a certain group the mortality is high, in another group it is low. Averages have been fixed on actually varying from 5 to 60 per cent., which shows that there are no scientific data as yet on the subject, and all is to a certain degree arbitrary. The committee have taken the lowest estimate, 5 per cent., for dog bites, and 30 per cent. for wolf bites, a percentage which will hardly please the Pasteurians. Here we may dwell on a series of observations which fully bear out all we have said in reference to the hydrophobia scare, and to the unreliability of the evidence that the persons who went to Pasteur were ever in danger of contracting hydrophobia. We require no further evidence on this question to convince our readers that our attitude has been perfectly justifiable. Prof. Burdon Sanderson, Dr. Lauder Brunton and Mr. Horsley went to Paris, and personally investigated the history of 90 patients whose names appeared on Pasteur's list; they are average cases. Now let us mark the result. In 31 cases there was no reliable evidence that the dogs inflicting the bites were rabid; in the others the bites were inflicted through the clothes; 24 were bitten on exposed parts by dogs rabid. We may dismiss the 31 bitten by non-rabid dogs and those bitten through the clothes; the 24 cases are of interest. Here the committee make a calculation which requires explanation. Taking the 90, the committee say 8 would have died had it not been for the inoculations. As they have already fixed a 5 per cent. mortality, we cannot see the justification for raising it; and as the 24 were only exposed, taking a mortality of 8 persons for the 24 gives a mortality of something like 32 per cent. The 66 other patients out of the 90 were treated just as the 24 patients. They were injected, and it is a matter of congratulation that they were none the worse for the treatment. Here we have a part of the problem upon which light is needed. If the Pasteur virus was efficacious in eating up the pabulum in the case of the 24, who, according to the committee, were exposed to the danger of contracting hydrophobia, what was its effect on those who really did not require the injections? This of course opens out the whole question. What is the nature of the rabic virus, and what is the nature of the antidote? It is not too much to say that we know nothing of either, and that the system rests on an empirical basis. The dosage is not even fixed. M. Pasteur is groping in the dark; he has changed his methods, the surest proof of the imperfection of his processes. The aggregate cases treated by Pasteur up to the date of the committee's inquiry were 2,634 persons. The committee form a very different estimate, indeed, from that shared by the late Prof. Vulpian (and they will probably cause some consternation amongst the ultra admirers of the method) as to the actual results in this number of cases. They give M. Pasteur credit for only saving 100 lives. This is, of course, something to be proud of, but it is very small, indeed, compared with the number claimed by some of M. Pasteur's countrymen.

"The committee, as scientific men, have not taken much notice of M. Pasteur's changing statements, or of the alteration in his methods. Poets are allowed poetic license, and M. Pasteur being, as it were, a kind of scientific poet, is accorded the same privilege. In estimating the mortality, and taking the figures at 100, the committee are obliged to ignore, or to interpret in another way, the actual mortality in France previous to the introduction of this method. We have it on evidence that the annual mortality in France from hydrophobia has been *thirty per annum.* The figures supporting this are admitted. To account for the saving of life and for the increased number of deaths, there ought to be, if Pasteur is correct, an average mortality in France which will approach 100. An assumption is thrown out that the annual mortality in France is a great deal more than that record—physicians, owing to the fear of hydrophobia, recording the deaths from that disease under a false name. This is not only an assumption, but almost a libel on the profession; it is not supported by a tittle of evidence. If such an assumption be allowed, a contra one may also be allowed to the effect that the death-rate in France is now too high, even at the 30 figure. Owing to ignorance as to what hydrophobia really is, cases of death are certified as being due to it which ought really to be classed under a very different nomenclature. The disorders mistaken for hydrophobia, as pointed out by ourselves and Dulles, of Philadelphia, are very numerous, and there are too many cases on record to prove this. We give an example: Mr. W. Robinson, Superintendent of Statistics for Scotland, reported to us that, during the years 1855 and 1874, inclusive, there were registered, under the heading of hydrophobia, the following cases, which, after full investigation, were placed under their true headings: A case of malignant pustule in 1885; five cases of snake-bite in various years; in 1860, three deaths from glanders; in 1862, one death from glanders; in 1871, three deaths from glanders and one from farcy. Here is evidence to show that mistakes of this kind do occur. Unless checked, the mortality from hydrophobia in Scotland would have looked much higher. Hypotheses and suggestions are double-edged weapons. Unfortunately, there is but too much hypothesis in connection with the second part of the report, and hence even the low estimate has very little scientific value. If M. Pasteur's work is to be simply judged by his own estimations, and by statements made by him to explain the discrepancy between the actual death-rate and this hypothetical death-rate, then the value of this report is lessened.

"We put this question in another form: If we have a 5 per cent. mortality—assuming that M. Pasteur has had 2,000 French subjects under his treatment—M. Pasteur would have saved 100 lives; if 10 per cent., 200; if 20 per cent., 400; if 30 per cent., 500; and so on up to the highest, 60 per cent. To balance these figures we would require a varying French mortality—in other words, the facts would have to fit the figures expressed in percentages. Unfortunately, the mortality in France antecedent to the introduction of the method will not fit the lowest estimate—even with 50 per cent. added.

"Lutand has pointed out that the death-rate has been higher since the introduction of the method, attributing the increase to M. Pasteur's intensive process. The committee, or rather we should say Mr. Horsley, because here we think we can trace his handwriting, show the personal equation we have alluded to. The unfortunate man Goffi died from what is known as dumb rabies, after being inoculated by the intensive process. Yet, in the face of the evidence, not only of the death of Goffi, but of the other patients who have succumbed, the committee try to whitewash M. Pasteur by throwing out the hypothesis that Goffi died from the virus of the cat. Still more, this is done even in the face of M. Pasteur's own recantation. Finding his intensive method yielding results which might be challenged, he has modified it: in place of using a cord one day old, he now uses one of five days. No deaths were caused by the first method, which appears by its effects to have produced no change upon the patients. The explanation of this has yet to be scientifically solved. Theories may easily be put forward to account for the seeming inocuity of the injections.

"The *British Medical Journal,* July 2d, very justly observes, referring to the assumption that Goffi died of the virus of the cat: "This statement appears to go near to begging the whole question, for the matter in dispute is the behavior of the 'intensive virus' in man, and a most important element is the duration of incubation. The unusual nature of the symptoms also requires explanation, for the suggestion that the cases hitherto described under the term 'acute ascending paralysis,' or 'Landry's paralysis,' are, in many instances, examples of the dumb or paralytic form of rabies in man, rests upon the single observations of Mr. Horsley, and ignores the fact that a large proportion of such cases recover." This criticism is just, and it reveals to us that we really have to deal with Mr. Horsley, the report being *the voice* of the committee, it is true, but the interpretation being that of the secretary of the Commission. In the interests of science, it is a matter of regret that the death of Wild at Rotherham was not cleared up.

"What concerns us most in this report is the conclusion, and it is certainly a little surprising. Though convinced of the efficacy of the Pasteur treatment, yet we are not to have a Pasteur Institute in England. Our dog-bitten patients will have still to go to France and incur all the expense of such a journey. We are to have 800 persons bitten by rabid dogs annually—170 in London, because we have an annual mortality of 40 per year? Surely, there is something a little strange in this. Why should we not have the remedy at our own doors? We ask, why? The committee conclude by recommending what we have been impressing for the past twelve years—a more stringent regulation of dogs. Here we are in agreement. We said in our pamphlet, published in July, 1886:

"'*But something more is required than even a remedy for hydrophobia.* Even though Pasteur gave us a remedy against the bites of rabid dogs, yet we have something more to do—we have to extinguish the disease in the dog. *Combattre la rage, c'est prévenir l'hydrophobie.* Can rabies be extinguished in the dog?'

"We gave the evidence from the Hague, and insisted on the necessity of a new Dog Act:

"'At the International Congress, London, 1881, Dr. Van Cappelle (the Hague) read a very practical paper on the methods adopted in Holland to check rabies. I supported a resolution proposed by him to the effect that that Congress should declare it desirable that the governments of all civilized countries should agree as to the measures for the abolition of the rabies. In Holland a stringent Dog Act is in force. Dr. Van Cappelle furnished evidence as to the efficiency of this Act in limited rabies. I think a more stringent Dog Act is required in England; and I have drawn up an Act which, if applied, would certainly go far to keep dogs under better control, and secure for them better protection. I throw the responsibility on the owners of dogs. I said, in 1879, that if an Act framed on the above lines were passed, both the human and canine species would be protected, for rabies in a few years would be almost stamped out. We should not then have periodic seasons of panic; nor should we hear of the destruction of so many dogs during the temporary excitement caused by the dread of hydrophobia.

"'If any further evidence on the value of prophylaxis is required, it is furnished by the later returns from Vienna of Dr. Frisch, who went to Paris to study Pasteur's method. He tells us the more severe the dog laws and regulations, the greater is the guarantee against hydrophobia. Bollinger has recently given us statistics on the value of stringent police regulations in Bavaria (*Mün. Med. Wochenschrift*, March, 1886), and all who are interested in the subject will find in Bollinger's paper interesting statistics confirmatory of the views of Dr. Van Cappelle and of my own.'

"Now this Commission has spoken, we may expect that some measures will be put in force, and that we shall have in due time a Dog Act which will effectually stamp out rabies."

WARTS.—Fifteen grains of corrosive sublimate in one ounce of collodion is said to be effective painted on warts.—*Medical Register.*

THE PROPER POSITION AT WHICH TO OPEN A FELON.—In opening a felon the parts to be avoided are lines of the arteries and that of the flexor tendon, which is the median line. The felon should be opened midway between the artery and tendon. If necessary, it can be opened on both sides. If the sheath of the tendon is opened the tendon will almost always slough, and the finger will be useless.—*Dr. John Ashhurst, Jr., in Polyclinic.*

UTERINE HÆMORRHAGE: A CONSIDERATION OF SOME OF THE LESS COMMON CAUSES AND THEIR TREATMENT.

By F. H. DAVENPORT, M.D., Assistant in Gynæcology, Harvard University. Read before the Section of Obstetrics and Gynæcology of Suffolk District Medical Society, April 20, 1887.

Hæmorrhage from the uterus, whether menorrhagia or metrorhagia, may be, as regards its cause, either active or passive; that is, it may result, in the first place, from the presence of something in the cavity of the uterus which directly attracts blood, causing active congestion; or, in the second place, from obstruction to the return of the venous blood, causing passive congestion. The importance of carefully distinguishing these two forms cannot be too strongly insisted upon, inasmuch as the treatment will be radically different as one or the other cause predominates.

It may be broadly stated that active hæmorrhage is due to causes inside the uterus itself, while passive hæmorrhage is due to causes outside the organ. As an example of the first, a submucous membrane may be instanced, and of the second, pelvic cellulitis. It will be readily seen, however, that in not a few cases both classes of causes may be operative. For example, a thickening of one or both broad ligaments may so interfere with the circulation as to induce congestion of the uterine membrane, and consequent menorrhagia. The prolonged congestion may lead to proliferation of the tissues and to so-called hyperplastic endometritis, or the development of polypoid growths, which themselves may actively determine an unusual flow of blood. The general distinction may, however, be maintained, and our treatment, in the one case, should be mainly intra-uterine, and in the other, directed to conditions outside the organ. This applies, of course, only to radical treatment, for we are often driven by the alarming severity of the flow to temporarily, at least, resort to the most effectual means, regardless of the predisposing cause.

Most uterine hæmorrhages are intermittent, the periods of severe, and possibly alarming, flowing being followed by intervals of either complete cessation, or very nearly so. When the flow is at its maximum little more can usually be done than to check it, reserving a more thorough examination to determine its cause for the interval of comparative quiescence. It is certainly a mistake to neglect such an examination. If the hæmorrhage occurs only at the time of the menstrual period in a young girl, general hygienic and tonic treatment should be tried before resorting to a vaginal examination; but if it occurs in the inter-menstrual period, whether the woman be married or single, and in any case in a married woman, its cause should be sought for by every means in our power. Too often the failure to do this in a case of beginning epithelioma, for instance, allows the favorable moment for the performance of a radical operation to slip by, and when the delayed examination is made, the disease is found to be so far advanced as not to admit of any palliative treatment.

This caution applies particularly to hæmorrhages occurring between forty and fifty, or at the time the menopause is expected. Irregularities in the amount of the menstrual flow in women of that age excite little alarm, for they are considered by the women themselves, and too often by the physician, as the natural accompaniment of the "change of life."

Certain statistics with regard to the comparative frequency of the various causes of uterine hæmorrhage, and the age at which they most frequently occur, will illustrate the importance of this warning. Dr. Sneguireff, of Moscow, has written a monograph on uterine hæmorrhage, in which he gives a table prepared from all the data which he could collect, which shows the following facts: By far the most frequent cause of hæmorrhage from the uterus is cancer, constituting 25 per cent., or a quarter of all the cases we meet with. The next most common cause is fibroid, 19 per cent.; then metritis, 10 per cent.; endometritis, 8 per cent.; abortions and subinvolution, 5 per cent.; and twenty-two other less frequent causes, ranging from 3 per cent. to 1 per cent. each.

A second table gives the relative frequency of the different causes of uterine hæmorrhage at the different ages. From this we see that nearly 90 per cent. of cases of hæmorrhage from cancer occur in women over thirty-five, and 58 per cent. in those over forty-five; that nearly 50 per cent. of hæmorrhages from fibroids are in women over thirty-five, and 25 per cent. in those over forty-five, showing that nearly half of all cases of hæmorrhagia that we meet occur in the years about the menopause, and are due to the two grave affections, cancer and fibroid. In striking contrast to these statistics is the fact that less than 1 per cent. of such cases can be referred to the menopause as the sole cause; that is, where nothing else to account for it can be found.

Of especially grave import are irregular "flowing spells" occurring after the menopause is once established. No reluctance on the part of the patient to submitting to an examination should induce the attending physician to fail to insist upon its importance.

Another class of cases which is too often neglected is that where the menstrual flow is excessive. Many a woman is kept in a condition of enfeebled health from the monthly drain upon her system, in whose case a little care would so moderate the flow as to enable her to thoroughly recuperate in the intermenstrual period. I am convinced that there are cases, not a few, where the women are better off for not menstruating at all. They can ill afford to lose any blood, and if nature has not pointed out the true remedy by a state of amenorrhœa, any flow of blood should be looked upon as a hæmorrhage, and be treated as such. In such cases rest in bed and frequent hot-water douches will often reduce the flow to a minimum, or stop it altogether.

On the other hand, it is often a difficult matter in cases where the menstrual flow is profuse, to decide whether it is excessive, and needs to be checked or not. I have a patient who has always flowed a great deal, using on an average thirty napkins and passing numerous clots besides. When she was regaining her strength after an operation, I feared the drain upon her system was too much, and diminished the amount of the flow after the first three days by ergot and hot water injections. But severe headaches, increased backache, and bearing down followed, and I became convinced that in her case this large amount was none too much. There must be a great difference in the blood-making capabilities of different women, otherwise we cannot account for so great a monthly loss of blood in one case being not only not followed by bad consequences, but even necessary to a comfortable degree of health, while a third of the amount in another woman is a severe drain, from which she does not recover in the intermenstrual period, but grows steadily weaker.

Hæmorrhage during menstruation, or menorrhagia, rarely calls for active local treatment at the time, as the amount of blood lost can usually be controlled by internal medication, rest in bed and hot douches. Occasionally, however, the vaginal tampon is necessary. But a great deal can be accomplished by treatment during the intermenstrual period, both in the way of relieving congestion by local measures, and particularly by regulating the habits and mode of life of the patient. I have several times seen severe menorrhagia in young girls who were studying too hard and taking too little exercise, where removing them from school and from the excitements of city life, and insisting upon out-door exercise, with some ferruginous tonic, has resulted in immediate diminution of the amount of blood lost. A vaginal examination is often not necessary in these cases. Where I have made one I have usually found a small flabby anæmic uterus, cervix conical, and possibly anteflexed, and an absence of leucorrhœa. Here the bleeding seemed to be directly due to the atonic condition of the uterus.

By far the greater number of cases of hæmorrhage, both during the catamenia and in the interval, are associated with a congested, enlarged and sensitive uterus, and there is considerable leucorrhœa when the bloody discharge ceases. Sometimes we find nothing but the above conditions on local examination, and are forced to interrogate other organs, at a distance, as heart, lungs or kidneys, or to look for some morbid diathesis as a predisposing cause. In this connection some observations lately published in the *British Medical Journal*, are of interest. In investigating some questions with regard to phthisis, Dr. Handford found confirmation of the following maxims:

1st. Early or excessive menstruation is an important and common predisposing cause of phthisis.

2d. The female children of phthisical parents tend to menstruate unduly early and excessively.

In support of these views, in addition to some cases of his own, he quotes Dr. Grailly Hewitt, who says: "According to my experience, young women in whom there are signs of a tendency to, or an actual development of, tubercle, are very frequently the subjects of profuse menstruation, the cause being the defective and vitiated state of the blood."

It may be considered doubtful whether, as Dr. Handford states, menorrhagia is a *common* predisposing cause of phthisis, yet, in view of these facts, it certainly should be looked upon as a suspicious circumstance, when a child of phthisical parents flows early and excessively, and we should use all the means in our power to check it.

As a rule, the vaginal examination will reveal some definite cause for the increased congestion and the consequent hæmorrhage, and this must be the object of our treatment. To enumerate the pathological changes which give rise to uterine congestion would be to go over pretty much the whole field of uterine disease. It may be of interest, however, to notice rather more in detail a few of the less common causes.

I have alluded above to atony of the uterus. I have occasionally found menorrhagia associated with a condition of anteflexion, usually of the neck, sometimes of both body and neck, in an anæmic woman, with flabby muscles, weak action of the heart, poor appetite and delicate digestion, and I have been rather at a loss to satisfactorily explain the logical sequence of events. I am inclined to agree with Graill y Hewitt in attributing the symptoms we find in these cases to malnutrition. He goes further than I would in considering malnutrition to be the most common cause of all uterine displacements, and their immediate results, but here I agree with him that the first factor of importance in these cases is an abnormal softening of the uterus due to too little food. When at the time of puberty the uterus develops, the body, which up to that time has been smaller than the cervix, fails to attain its proper size, and remains small and flabby, while the cervix bends forward on its axis at the internal os, and in time becomes permanently fixed in a condition of anteflexion, long conical, and pointing in the axis of the vagina. In these cases the menorrhagia, which is, to be sure, often only relatively profuse, is, as has been pointed out before, due to atony, and may best be treated by general hygienic and tonic treatment. Perhaps a more common cause of uterine hæmorrhage, and one which is quite frequently overlooked, is retroflexion of the uterus, especially when bound down by adhesions. Here the interference with the circulation is more marked, so that, in addition to a profuse menstrual dischage, there may be a slight but constant flow in the intermenstrual period. This often is hardly more than enough to necessitate the use of perhaps one napkin a day, and in some cases a profuse leucorrhœal discharge, at times brownish or tinged with blood, may be the only sign of congestion.

In the early stages the changes in the endometrium are very slight, but if the stasis be long-continued, there may result hyperplasia of the lining membrane, which in turn becomes a secondary and even more active cause of hæmorrhage than the original displacement. If treatment, however, be directed to the condition of the endometrium, either by astringent applications or by curetting, though temporary benefit may be attained, yet the diseased condition is likely to reproduce itself as long as the organ is in its abnormal position.

Treatment to be effectual should be primarily directed to the misplacement, and as adhesions are generally present in these cases, packing the vagina regularly with glycerine cotton tampons is the method most likely to be followed by success. This form of treatment fulfils several indications. In the first place, it is in my judgment the surest and safest method of overcoming the adhesions and restoring the organ to its normal position; in the second place, it usually is effectual in controlling the hæmorrhage; and in the third place, the glycerine, from its affinity for water, depletes the tissues and relieves congestion.

The following case will serve to illustrate this form of uterine hæmorrhage and its treatment:

Mrs. S. was first seen January 25, 1886. She was twenty-five years old, married three and a half years, has had two children, the oldest two and a half, the youngest fifteen months. She nursed her children, and the first menstruation since the birth of the last child came on in July, six months previous to my seeing her. This was normal in amount. The next catamenia flow was a week over time (the delay, as she thinks, having been occasioned by her going in bathing on the day her menses were expected), and she flowed profusely for a week. The same thing occurred in September. In October and November there was some improvement. December 8th, the sickness returned, and from that time until I saw her, a period of six weeks, she had only short intervals of a few days respite. At times there were smart hæmorrhages, but naturally the flow was moderate, and the patient kept about most of the time. She suffered considerable pain in back and right side, and the constant drain was beginning to tell on her strength. When she was not flowing there was a good deal of leucorrhœal discharge. The bowels were usually constipated. On examination, I found an enlarged and congested cervical portion, pointing in the axis of the vagina, the uterine body behind, and apparently fixed by adhesions in a position of retroversion with slight flexion. She was then flowing considerably.

I first carefully curetted the uterus with a dull wire curette, and removed a small amount of hyperplastic mucous membrane, and then tamponed the vagina tightly with glycerine cotton. This failed to control the hæmorrhage completely, some blood finding its way through the packing by the next day, but the amount was decidedly diminished. I removed the tampon the second day, and this time added a uterine plug of iron cotton to the vagina packing, which was successful in checking the hæmorrhage. Hoping that the curetting would be all that was immediately necessary, and thinking it would be wiser to delay the reposition of the uterus until the patient was stronger, no further local treatment was given, and, in fact, there was no return of the hæmorrhage for three weeks.

It then came on, and before I was called she had lost a great deal of blood. As this corresponded to the time of the catamenia, efforts were at first directed towards modifying, rather than completely checking the flow. Ergot, ergot and hamamelis and gallic acid were tried, and hot-water injections were given. The effect, however, was not what was desired, and a firm tampon of both uterus and vagina was resorted to, with good result. As it seemed evident that the ultimate cause was to be found in the displacement of the uterus, this time the systematic packing of the vagina was kept up during the inter-menstrual period, and the uterus was already in a much better position by the time the next menstruation was expected. This, though more profuse than was natural, did not call for any interference, and before the next sickness the uterus was in normal position, and the menstruation was of the ordinary amount. There has been no trouble since.

There is a form of hæmorrhage which is not very common, coming on in the early months of pregnancy. The history of the few cases I have seen is this: Somewhere from the second to the fourth month, usually without warning, there is a sudden gush of bright blood. This may be repeated a few times, the whole amount of blood lost not being very great, and this is followed by a slight, but persistent, bloody discharge, which lasts for weeks. At this time it is rarely bright, fresh blood, but of a dirty, brownish color. Usually there is no pain, and the patient feels perfectly well.

In one case which came under my observation there was the history of there having been a fall from a carriage some three weeks previously, and I found, on examination, retroflexion of the pregnant uterus. The uterus was replaced bimanually, and held in position by a pessary, but, as the flowing persisted, she was kept in bed for some weeks, hot-water injections given three times a day, and at the end of six weeks it stopped, and pregnancy went on uninterruptedly to full term.

Many of these cases, if left untreated, and the patient allowed to go about and exercise as usual, would result in miscarriage. The hæmorrhage seems to be the result of congestion, and though the cause may not always be so apparent as it was in the case referred to, yet the rest should be as rigidly enjoined.

Hæmorrhage following miscarriage due to the presence of a portion of the placenta should be energetically attacked by thoroughly emptying the uterus. If the miscarriage occurred between the second and fifth month, at which period of pregnancy the placenta is most likely to remain, I should not wait more than a few hours before taking measures to remove it. The dangers of delay are renewed hæmorrhage and septicæmia from decomposition, while the advantages of prompt action are that the cervix is usually so relaxed that the retained after-birth can be easily removed, and the patient is not in the weakened and exhausted condition which a continuance of the hæmorrhage or the onset of fever would occasion. In my experience if the placenta does not all come away with, or soon after the fœtus, it will not come spontaneously, and I have usually found it adherent over a small area at the fundus, the free portion coming down in the cervix and protruding. This is deceptive, for it gives the impression that it is detached, but held in the narrow cervix, and hopes of its being spontaneously expelled are aroused, which are quite sure to be disappointed. The finger, placental forceps, or various scoops which have been devised should be vigorously used under ether, until all of the placenta possible has been removed, leaving a roughened, shreddy surface where it was adherent.

A few words as to the value of, and indications for, internal remedies: The ones most commonly used are ergot, gallic acid, hamamelis, hydrastis canadensis and iron.

With ergot I have been disappointed, except in a few cases of fibroid during the time when the tumor seemed to be growing towards the interior, that is, changing from the interstitial to the submucous variety. When it had once got within the cavity and had become pedunculated, the ergot seemed to lose its effect. It has also proven of use in cases of subinvolution; but where the trouble is seated in the mucous membrane, as in cases of hyperplastic endometritis, for example, I have usually seen very little benefit, as regards the hæmorrhage, from its use.

Hamamelis alone, or with equal parts of ergot, I have also frequently given, but have been disappointed with the result. The mixture is exceedingly disagreeable to take, and has very little effect on the hæmorrhage.

With gallic acid I have been better pleased. Five to ten grains given in a wafer every three or four hours has often checked the flow, especially in cases where there is a great deal of passive congestion from some displacement or inflammatory condition about the uterus.

A good deal has been written lately in favor of hydrastif, and especially in Germany, surprisingly good results have been claimed in cases of menorrhagia due to endometritis and other pathological conditions of the lining membrane of the uterus. I have tried it only in one case, and then with no apparent benefit. It deserves a more thorough trial.

I have alluded to iron in speaking of atony of the uterus, and have often found it of great value in young women whose only complaint is excessive menstruation, and in that rare class of cases, chlorosis with menorrhagia. The tonic effect of the iron seems to be all they need.

The subject of uterine hæmorrhage is so wide a one that I have been rather embarrassed by the variety of aspects under which it might be considered. Many points of great interest have necessarily not been alluded to, and the consideration of those which have been touched upon has had to be brief. Still some light may have been thrown on some of the more obscure causes of uterine hæmorrhage, and I trust that the discussion will add much more of interest to this familiar subject.—*Boston Medical and Surgical Journal.*

An Inducement.—An Australian doctor advertises to pay one-half the funeral expenses in cases in which he is not successful.

TREATMENT BY INTUBATION OF THE LARYNX.

Dr. Dillon Browne, in the *Medical Record,* gives a tabulated record of 806 cases treated by intubation of the larynx, giving date, operator, sex, age, duration before intubation of laryngeal symptoms and pharyngeal diphtheria, albumen in urine, cause of death, complications and result, in each case, and recapitulates the whole as follows:

“Total number of operators, 65.

“Total number of cases, 806, with 221 recoveries, = 27.4 per cent. Male, 225; female, 198.

“Average age of fatal cases, 3 years 2 months.

“Average age of cases which recovered, 4 years 1⅓ month.

“Duration of laryngeal symptoms before intubation in cases of recovery, 2 days 9 hours; in cases of death, 1 day 19 hours.

“Urine contained albumen in 117 cases, and no albumen in 31 cases.

“In fatal cases, average length of life after intubation, 2 days 8 hours.

“In cases of recovery average time of tube in larynx 5 days 3½ ho'rs.

“Causes of death in 339 cases:

“Diphtheritic bronchitis	139
“Pneumonia	55
“Sepsis	37
“Exhaustion	33
“Nephritic complications	25
“Heart failure	20
“Pulmonary œdema	9
“Bronchitis	8
“Asphyxia, from clogging of tube	2
“ pushing down membrane	2
“ swelling over head of tube	1
“ neglect to notify the operator after coughing out tube	4
“Tuberculosis	2
“Congestion of lungs	1
“Scarlatina	1
	339

In one case which recovered tracheotomy was performed to remove tube.

CORRESPONDENCE.

STRICTURE OF THE ŒSOPHAGUS.

On the 28th day of December, 1886, A and B brought their child to me, aged 2 years. The child had, an hour before reaching me, by accident swallowed some concentrated lye. I immediately gave the antidote, but too late.

The child was not seen by me again until several weeks later. The parents would report every few days that the child was doing very well, but vomiting almost all the time, especially when it would eat or drink.

I went to see the child and found it making efforts to swallow, and it seemed in great distress, calling for water and milk almost constantly. Whatever was given her was promptly ejected. She was utterly unable to swallow a drop of fluid or food of any kind, and such had been her condition, seemingly, for sometime—for the child was very small and badly nourished.

The history was such as to make the diagnosis easy. We have now to deal with an organic stricture of the œsophagus, the result of a cicatrix. The cicatrix had gradually narrowed the calibre of the œsophagus, till, in consequence of some source of irritation of the stricture, deglutition became impossible.

I immediately returned to my office and took such instruments as I had, which consisted of stomach, nasal tubes and catheter. I made a mouth speculum of a piece of wood. At the first and second sitting I failed to pass even the smallest catheter, and on my return the third day, the parents had taken the child to F———, and put it under treatment of Dr. ———. His treatment, I learned, was trying to pass such instruments as I had failed to pass, but he utterly failed. The child was then being nourished by clysters.

Dr. ——— told the parents the last hope was gastrotomy. This the parents objected to, and brought the child home, after ten days' treatment under Dr. ———.

I was immediately sent for on its arrival. The child was not able to sit alone, and, unless relieved, she would soon perish of hunger and thirst. At this, the third sitting, I again failed to pass an instrument. Returned to my office *non-plused.* But, looking over my gynæcological instruments, I found a Simpson's uterine sound, and returning the next day to my patient, I gave the sound the proper curve, and succeeded in passing it through the stricture which required a great deal of *vis a tergo.*

The stricture was some four or five inches in extent, commencing at the junction of the pharynx and œsophagus and extending downward near the cardiac orifice of the stomach.

By gradual dilatation I succeeded in passing a catheter equal in size to a No. 8 on the American scale, and in eight or ten sittings could pass a No. 13 of the same scale. After each sitting I would have her fed on milk.

I will quote from Dr. Schell, who reports a similar case in the *Indiana Medical Journal.* He recommends the English bougies with the olive point, such as are commonly used in stricture of the urethra. He says: "They are, in my opinion, the best instruments to use for a similar purpose in stricture of the œsophagus, especially in children. They are more easily handled than the œsophageal bougie and are cheaper. They are sufficiently long for every use which we may have for them in children, and can easily be introduced into the stomach."

This is very true in some cases, but I tried the bougies and they were too flexible. No instrument suited this case better than the catheter with the wire left in it, and very often it would bend. I also tried an œsophageal dilator, but it failed to be of any service—it is a very expensive instrument, too.

The little child whose case I have reported gained rapidly in flesh under treatment. She is now running about in good health, and seems well except a cough which has been troubling her ever since she swallowed the lye.

"Since the finger must be introduced far into the mouth, it must be well wrapped, otherwise the child will constitute itself into an instrument of torture. This advice is also good in the introduction of the stomach-tube in morphia poisoning, as I have recently had occasion to learn, even where a good speculum was used."

I found the handle of a spoon to be the best instrument for opening her mouth. The child always resisted, and the spoon-handle being thin, could easily pass between her teeth when it was turned edgewise.

The parents are rather negligent with the child. It is brought to me now for treatment only when the symptoms are urgent.

The result in these cases is usually, in the end, unfortunate; still, with proper treatment, life can often be prolonged many years. Death usually results from some disorder of nutrition.

"In cases of malignant disease of the œsophagus, I think, as a rule, gastrotomy ought to be performed, unless the diagnosis is made very late. Of course the end is the same, but I think life would be prolonged and many of the most distressing symptoms would be avoided. It ought not, I think, be done for organic stricture, at least, not when any instrument can be passed."

J. R. Pearsall, Manchester, N. C.

AN INTERESTING CASE OF DROPSY.

During the month of June I was called to see Mr. H., and upon my arrival I found him suffering to an alarming extent with dropsy. By questions as to his manner of living, etc., I was informed that he had been an habitual whiskey-drinker all his life, although by no means an habitual drunkard. I first examined his urine, and found it to be very small in quantity, very pale in color, emitted a very disagreeable odor, very high specific gravity and albumen in enormous quantities. I am sure that I never saw more in any specimen in my life. I noticed at the same time an enlargement in left side resembling a fever-cake, which I could not account for, as he had never been a sufferer of malaria to cause an enlargement of spleen. At times, too, it would pulsate. I thought it probable it was an abscess of the spleen. A hypodermic needle having been introduced was withdrawn full of pure clear water with an alkaline reaction. I applied test for albumen and found with nitric acid it gave a white precipitate. By this time I was alarmed to know the real cause and pathology of this enlargement. I turned my attention for a time to the kidneys and found the left kidney much enlarged, and that the enlargement was continuous with the enlargement of the spleen, as I had thought. I then was relieved, to some extent, for I decided the trouble to be dilatation of the tubes of the left kidney. If this was wrong I don't know what it was. It is well enough to state, however, that the patient had been suffering with dropsy for sometime before this enlargement was noticed. My diagnosis, or rather my idea of the primary cause of the trouble, was Bright's disease of the kidneys.

Treatment.—Patient had been under treatment of other physicians and knew a great deal about what he had been taking, and told me that it was "no use to give him jalap or cream of tartar, for he had worn it out, and that the largest doses would affect him only to make him worse." My first prescription was eleterum, $\frac{1}{4}$ grain, cream of tartar, 10 grains—3 times a day; tr. digitalis, tr. belladonna, each 10 drops. every 2 hours. Very soon he began to improve, but I was forced to drop the eleterum because of its depressing effect if given in doses sufficiently large to do any good. I then put him upon *Stillè's* prescription of digitalis, squills, com. spts. juniper, acet. pot., iodide pot. Also gave two tablespoonfuls Epsom salts every night just before going to bed. Upon this treatment he mended nicely. The enlargement passed away and never made its appearance again. In the meantime he had a fall, causing injury to the knee-joint, and a severe inflammation set in, which resulted in ulceration.

Amputation was advised, but patient refused to allow the operation. Constitutional and local treatment improved the condition of the injured limb for awhile, but chills and fevers (probably septic) set in, and he rapidly passed away.

Now, one of the strange features in this case was the amount of digitalis the patient could take and which was absolutely demanded to keep up the action of the heart. In my first prescription was 10 drops every 2 hours. It was found to be insufficient, when I prescribed in my second 30 drops, 3 times a day. Afterwards, when the dropsy had passed off, I was forced to use from 25 to 40 drops every hour.

Drs. Vick and Crawford, of Selma, were called by myself to see him at the time when I was administering from 30 to 40 drops *every hour.* During all this time while he would take the digitalis his heart acted *nicely* and had a *good strong pulse,* that is, his pulse would be good after the administration until the hour was nearing its close, when it would begin to flag, but so soon as the drug was given again, it would rally and be as good as ever. This was the case through the latter stages, and I saw him just before his death, and his pulse was good. I am satisfied that digitalis kept him alive two months.

This was to me a very interesting case. I have reported it because I wanted to impress the fact that, to get the benefit of medicine, we must push it till we get its full effect, and to know when we get that we must watch our patients.

I have not given all the minute points of treatment, but if I have put any one to thinking, it is a satisfaction sufficient for me.

L. G. Broughton, Kenly, Johnston County, N. C.

NCMedJ (OS) 20:181, #3, Sept. 1887

A Matter of History.—Dr. James Norcom, of Edenton, N. C., was the first physician in North Carolina that ever took off a leg. He performed the surgical operation about 1814, and it was looked on as a great triumph of medical skill. The negro got well, and when he came out on the streets crowds followed him, and he was an admirable hobbling advertisement for the doctor. His practice extended far and wide as a great surgeon. The other doctors in Edenton were not slow in finding out that Dr. Norcom had a reputation above and beyond all the others; nor were they slow in finding out that his reputation was owing to his taking off the negro's leg, and they naturally, one and all, took to cutting off negroes' legs. If a negro had a sore on his heel, his leg came off. If he had rheumatism, his leg came off. If he broke his leg, it came off. If he sprained his ankle, his leg came off. If he stumped his toe, his leg came off. Therefore it can be easily seen how "one-legged negroes" became as conspicuous on the streets of Edenton as "pretty girls." From 1814 to 1820 it was as common to cut off a negro's leg as it is now to give quinine for malarial epigastritis.—*Elizabeth City Economist.*

REVIEWS AND BOOK NOTICES.

WHAT TO DO IN CASES OF POISONING. By WILLIAM MURRELL, M.D., F.R.C.P. Edited by Frank Woodbury, M.D., Medical Register Company. Philadelphia. 1887. Sm. 8vo. Pp. 158.

This work appeared recently in the columns of the *Medical Register*, and has been edited by Dr. Woodbury and reprinted. Dr. Murrell has been known for sometime in England by his work in toxicology, and we are glad to add this useful volume to our armamentarium in cases of necessity. The subjects are arranged alphabetically to facilitate ready reference. The author has made the book far more valuable by adding the names and approximate composition of many of the nostrums of the day that have poisonous properties. Great perplexities many times arise from a lack of knowledge of the harmful ingredients contained in many of them. It is especially useful to be able to assure a patient who, by mistake, has taken what is to him an unknown substance. The writer recollects how great was the relief caused by assurance that a certain powder sent by mistake of the apothecary was harmless. Compound licorice powder had been ordered and the patient got fly-poison—powdered pyrethrum—instead. *Nothing but good results* followed the insect powder, and afterwards, when all danger was past, considerable amusement was had at the patient's expense. But to return to our book: Dr. Woodbury has made what corrections were necessary to make the text agree with the U.S.Ph., and a close examination does not reveal any omissions by the author, but a fuller and more complete list of substances and antidotes than we have seen in similar works.

WILLIS AND GEORGE III.

We are reminded of the importance of medical opinions by the interesting account given in Lecky's recent volume (V.) of his "History of England in the 18th Century."

"Dr. Willis was a clergyman as well as a physician, and he had for the last twenty-eight years kept an asylum for insane persons in Lincolnshire, and had treated them with extraordinary success. Like most specialists, he had his enemies, and by some he was considered little better than a mountebank; but though the other doctors about the king may have ranked higher in their profession, none of them could speak on a question of insanity with so great a weight of experience. Dr. Willis, on seeing the king, at once declared that his recovery was almost certain, and that it was likely to take place in a short time. This was in 1788. The management of the case was placed mainly in the hands of Dr. Willis, who resided permanently at Kew. "A new treatment was adopted; it was noticed that Willis at once obtained a complete ascendancy over his patient, and some slight improvement was already visible."

The king recovered in 1789, according to Willis' prognosis, although he had relapses which became permanent in 1810.

Willis' name has descended to us, and more permanently than as an alienist, by reason of his researches in the anatomy of the brain.

A MANUAL OF TREATMENT BY MASSAGE AND METHODICAL MUSCLE EXERCISE. By JOSEPH SCHREIBER, M.D. Philadelphia: Lea Brothers & Co., 1887. Price $2.75.

Massage has been largely in the hands of "professionals" who have increased their own importance and added mystery to their art by a multiplication of almost superstitious observances.

This volume is written with great faith in mechano-therapy, and the author has succeeded admirably in raising the art from its former doubtful position to that of an admirable auxiliary of recognized medication.

It seems to us that no one can read this book without gaining the impression that in "massage" we have a broadened field of treatment in many diseases, and that the younger practitioners, who are not so irreconcilably wedded to the old that they can see nothing in new methods, will be stimulated to a diligent mastery of the art.

Minute descriptions of methods are given with accompanying illustrations, so that there need not be the least difficulty in understanding all the author intends to convey.

The author says that it is a curious fact that, while in Sweden, Germany, Austria, Russia, England and America, many eminent scientists are seeking to further its progress, by both word and deed, in France, where, twenty years ago, so much activity was displayed in this field, and so many valuable ideas brought to light, at present it is the exception either for a clinician to prescribe mechano-therapy, or for any one of scientific attainments to busy himself with it."

But how much of this statement comes from national prejudice may be conjectured from the fact that Prof. Dujardin-Beaumetz is contributing elaborate articles to the *Therapeutic Gazette* on this subject.

If the arts of mechano-therapy can be accomplished by the practitioner by reading a book, he will be able to get it from this one.

ILLUSTRATIONS OF CLINICAL SURGERY. By JONATHAN HUTCHINSON, F.R.S.

This is the 19th fasciculus and last but one of this admirable work, which is to be completed in this, the second, volume. The plates illustrate "Injuries Near to the Wrist," "Elephantiasis of the Prepuce," "Various Cases of Elephantiasis" "Elephantiasis of Both Legs."

Mr. Hutchinson's general remarks on elephantiasis are, like all of his clinical teachings, remarkably clear and judicious. He says it is not difficult to understand the nature of elephantiasis if we begin with the study of early cases. It is only in its advanced and exaggerated forms that the disease assumes grotesque and extraordinary features. He does not believe that there is any real distinction between the elephantiasis of the tropics and that which occurs in Britain. The differency in frequency is the only one he can trace. There can be no doubt that an unhealthy climate, the exposure to a hot, moist atmosphere and other influences which impair the general tone of the system, have a very important influence in favoring the development of elephantoid conditions. It is probable, also, that the presence of the *Filaria sanguinis hominis* takes its share in aggravating the disease, but abundant clinical facts make it quite impossible to believe that this parasite is the sole cause of the disease, or of any peculiar form of it. Attacks of inflammatory œdema, repeatedly recurring, are the almost constant precursors and causes of elephantiasis. It is to be regretted that these sumptuous volumes are so expensive that they will not be widely circulated.

"ON A NEW CRANIOPHORE FOR USE IN MAKING COMPOSITE PHOTOGRAPHS OF SKULLS." By JOHN S. BILLINGS and WASHINGTON MATTHEWS.

This is a pamphlet in 4to form, containing four photographs of the apparatus, with a preliminary description. The contribution was made to the American Academy of Sciences, being the 14th memoir of Vol. III.

INDEX-CATALOGUE OF THE LIBRARY OF THE SURGEON GENERAL'S OFFICE, UNITED STATES ARMY. Vol. VIII. **Legier-Medicine** (Naval). Washington: Government Printing Office, 1887.

Another huge installment is before us in the eighth volume of the Index-Catalogue. NC Med J (OS) 20: 185, # 3, Sept. 1887.

The summary of the contents of this volume, as stated by Dr. Billings, is as follows: Titles, 86,979, volumes, 44,559, pamphlets, 72,902, book-titles, 83,155, journal articles, 278,231. We have become so much accustomed to this table of figures as volume after volume have issued from the press, that we are no longer astonished at the immense work of cataloguing this immense library.

The title "Medicine" covers 288 pages, and is yet not completed in this volume. The great difficulties which beset the librarian in preparing this list can only be appreciated by the librarian himself.

We notice under the head of MEDICAL SOCIETY OF NORTH CAROLINA (Transactions) that there is wanting in this library Transactions for 1851 and 1854, and if this meets the eye of one of our readers who owns these two volumes, we request that he send them to Dr. Billings, or to the JOURNAL, and they will be forwarded.

As this great work approaches its completion it is a cause of congratulation to the profession that its able editor has been spared to push it forward. With its completion the medical profession of the world will have the completest bibliography in existence—certainly the most accessible one of all. We congratulate Dr. Billings and his able assistants, who have for so many years had this great work in charge, that the precious collection they have had in hand for all these years, is now about to be housed in a building as nearly fireproof, and as well adapted to the needs of a library, as can be.

DOSE AND PRICE LABELS OF ALL THE DRUGS AND PREPARATIONS of the U. S. Ph., 1880, together with many unofficial articles that are frequently called for as medicines or used in the arts. By C. L. LOCHMAN. Dunlap & Clark, 819 Filbert St., Philadelphia. 1887.

This is a unique publication serving as well as a reference book of articles and dose-book, as a book from which labels may be cut for bottles. The printing is clear and the dosage is reliable. A blank space is left on each label to mark the price. Tables are given for the conversion of the Fahrenheit scale, for graduating doses for age of patient, tables of weights and measure showing weight equivalents, the metric standards and equivalents, abbreviations used in prescriptions, list of incompatibles and dangerous compounds of drugs. To druggists and physicians who dispense their own medicines it is very valuable. Mr. Lochman is an accomplished pharmacist, the translator of the German Pharmacopœia, and knows the needs of the two professions.

SEXUAL IMPOTENCE IN THE MALE AND FEMALE. By WILLIAM A. HAMMOND, M.D., etc., etc. Detroit: George S. Davis, 1887.

Another work on sexual impotence seems hardly necessary after the late work of Dr. S. W. Gross, but of the "making of many books there is no end."

The author says in his preface that "Probably more unhappiness is caused by sexual impotence than by any other disease that afflicts mankind," and this, we admit, may be a just estimate, but it is not a work which will interest the great body of the profession, but only the few whose patrons are among the most self-indulgent or the most debased of creatures, with occasional rare exceptions.

There is nothing lacking in this volume to show the author's thorough mastery of the subject. The publishers have issued the volume in good style.

THE STUDENT'S GUIDE TO DISEASES OF THE EYE. By EDWARD NETTLESHIP, F.R.C.S. Third American from fourth English Edition, with a Chapter on Examination of Color Perception by WILLIAM THOMSON, M.D. Philadelphia: Lea Brothers & Co., 1887. 8vo. Price $2.75.

Nettleship on the Eye has been a trusted hand-book for several years, and we welcome this new and enlarged edition with pleasure. It is especially adapted to the use of the general practitioner—the country doctor—the man of all-work, who has to show his skill in all the departments of medicine—and this is a numerous class throughout the South.

The proper place of cocaine in ophthalmic surgery is fairly and concisely stated, and all the practical advances have been carefully noticed since the earlier editions.

Many new illustrations have been inserted and the text increased by thirty pages. It is handsomely printed and is a compact and handy volume.

ANÆMIA. By FREDERICK P. HENRY, M.D. P. Blakiston Son & Co. 1887. Price 75c.

One is enticed by this little book by reason of its dainty French-like binding and beautiful typography, resembling the new American volumes of Balzac, which are so popular. But its merit does not consist in this alone, for the subject matter is of value and well worth a careful reading. Anæmia is so often spoken of and written about, and treated in such a loose and indefinite way, as to show how much need there is of a thorough restating of the whole case, and this our author does clearly and instructively. We will always welcome his writing as good, and enjoy this new departure in book-binding and this clear type.

ETOWAH. A Romance of the Confederacy. By FRANCIS FONTAINE.

We have received advanced sheets of this romance. It is not in our line to review works of fiction, but we cannot conceal the intense interest we feel in the ante-bellum South. To the outside world it is a land all unknown, and to the skilful fiction writer it affords unending material.

The South will be fortunate if she has for her romance writers men and women of her own blood, as is the case of the author of *Etowah*.

As far as we can see this pleasant story is made to include some valuable things for the younger people of the South to know of their ancestors, and it will have a large sale, and one-half of the sale will be devoted to the building of a Veteran's Home in Atlanta.

TRANSACTIONS OF THE ASSOCIATION OF AMERICAN PHYSICIANS. Vol. I. 1886.

This is the volume of annual transactions of an exclusive association of physicians having a membership of one hundred. We notice the Southern names: Dr. F. Peyre Porcher and Dr. Joseph Jones. The volume is comparatively thin, as compared with the old Transactions of the American Medical Association, but all extended business details are excluded, and we have nothing presented to us but finished products, and pretty good they are. There are 19 contributions, viz: "Chronic Catarrhal Gastritis," etc., by Francis Delafield, M.D.; "The Tendon-jerk and Muscle-jerk in

Disease, and Especially in Posterior Sclerosis," by S. Weir Mitchell, Member of the National Academy of Sciences, and Morris J. Lewis, M.D. ; "Method of Managing Typhoid Fever," by F. Peyre Porcher, M.D. ; "Does the Present State of Knowledge Justify a Clinical and Pathological Correlation of Rheumatism, Gout, Diabetes and Chronic Bright's Disease?" by James Tyson, M.D., *referee*, and W. H. Draper, M.D., co-*referee ;* "Spasm of the Glottis in Rickets," by James T. Whitaker, M.D. ; "Notes on Some Cases of Diaphragmatic Pleurisy," by Edward T. Bruen, M.D. ; "Certain Elements Found in the Blood in Cases of Malarial Fever," by W. T. Councilman, M.D. ; "Tetany," by Henry M. Lyman, M.D. ; "Periuterine Inflammation," by William M. Polk, M.D. ; "An Experimental Study of Glomerulo-Nephritis," by William H. Welch, M.D.; "The Bicuspid Condition of the Aortic Valves," by William Osler, M.D. ; "The Bacillus of Typhoid Fever (Typhus Bacillus of Ebenth)," by George M. Sternberg, M.D. ; "Experimental Myotic or Malignant Ulcerative Endocarditis ; with Demonstration of Specimens," by T. Mitchell Prudden, M.D. ; "A Clinical Study of Lateral Hemianopsia," by E. C. Seguin, M.D. ; "The Pig-backed or Alcoholic Kidney of Drunkards," by H. F. Formad, M.D. ; "A Case of Hodgken's Disease," by F. Forcheimer, M.D. ; "Pancreatic Hæmorrhage and Sudden Death," by T. M. Draper, M.D. ; "Notes of a Case of Hepatico-Bronchial Fistula," by J. E. Graham, M.D.

The volume is well produced typographically, and we will not grumble with such scientific work, even if it is from a seclusive body which takes away some of the best material from other societies. There is room enough in this broad land for societies of the two species which may be roughly described—*first*, the large, patriotic, legislating, banquet-enjoying species, impatient of long-drawn papers ; and *second*, the smaller species with well studied papers, always sure of an appreciative audience to listen to them, always coming to their meetings with predigested discussion in their minds. The work from both species has its supporters and advocates, showing that no amount of argument will enable one to persuade the other to desist as long as the differences exist between the castes of American medical intellect.

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN WILMINGTON, N. C.

Thomas F. Wood, M. D., Wilmington, N. C., } Editors.
Geo. Gillett Thomas, M. D., " }

☞ *Original communications are solicited from all parts of the country, and especially from the medical profession of* The Carolinas. *Articles requiring illustrations can be promptly supplied by previous arrangement with the Editors. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to the* Journal, *by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to* Thomas F. Wood, M. D., *P. O. Drawer* 791, *Wilmington, N. C.*

THE NINTH INTERNATIONAL MEDICAL CONGRESS.

The meeting of this body in Washington City on the 5th of the month has been so thoroughly advertised through the daily papers that little is left to be said of it except the impressions that are left to those who registered among its members and were participants or listeners in the sessions of the sections and the general meetings of the whole body.

The unfortunate disagreements that followed the early arrangements made for the Congress left their marks plainly in this gathering. The resignations of the gentlemen first assigned to prominent places in the sections, after the American Medical Association saw fit to supervise the work of the original Committee of Arrangements, meant that these physicians would not participate in the proceedings of the Congress. The fact is, the matter most to be regretted is the unkind feeling that has arisen between the two parties in the disagreement, and the jealousies that will and have naturally grown out of it. But these things belong to the past so far as we are concerned. The Congress has met and adjourned, and its work will stand now upon whatever merit it may have.

The predominant feature to us in our observations of the work in the sections was the earnest and determined way in which the profession from the Southwestern States declared themselves. They were ever ready for the fray, no matter who entered the lists, and doughty warriors they proved in many instances. If New York, Boston and Philadelphia saw fit to shake their skirts clear of the responsibility of the dismal failure that they prophesied would be the result of the meeting under the new order of arrangements, Chicago and her sister cities in the West and Southwest rushed in to fire up the breach and declare themselves equal to the task that their Committee had laid out for them.

The proceedings will be printed, for the chiel was amang them takin' notes, and they are already issuing in the great weeklies. "By their works ye shall know them."

The number of foreign delegates was comparatively small, though there were among those present men of distinguished merit, whose presence gave weight to the proceedings and pleasure to all who were members of the Congress. It is worthy of remark that the best work of the Congress was that offered by native physicians, and much of it will bear careful reading and elicit favorable criticism.

We hope now, that the Congress has adjourned, that the earnest and successful efforts of the Committee of Arrangements will be duly appreciated, for the labors were great, and they have every reason to look with pride and satisfaction upon their work.

The entertainments provided for the meeting were of a generous character, and the beautiful capital city was in itself a source of amusement and instruction, affording ample opportunities for the profitable employment of such moments as were not spent in the particular work of the Congress.

The profession owes much to Dr. Hamilton, the Secretary General, and Dr. Toner, at the head of the Committee of Arrangements, for the careful preparations that were made and for the eminently satisfactory performance of the duties their position placed upon them.

INTERNATIONAL MEDICAL CONGRESS.

Dr. Pavy, of London, England, spoke on

DIABETES.

This disease has always been regarded as an inscrutable one. There are still many points open for earnest study and patient investigation. The nature of the disease is that of faulty disposal and assimilation of food elements. Foods taken into the body are classed as nitrogenous, fatty, and the carbohydrates. It is this latter class that especially concern us in diabetes. Starch-dextrine, lactic- and cane-sugar go to make up this group, and each has an equal action, when ingested, in causing the condition of diabetes.

Normally the carbohydrates are disposed of in the portal vein, from whence they are carried to the liver and there assimilated. Experiments in which defibrinated blood or oxygen have been injected into the portal vein have been followed by marked evidences of sugar in the urine. Similar results have been produced in animals by forced respiration, thereby supersaturating the blood with oxygen. Vaso-motor paralysis of the hepatic vessels, by causing an excess of blood, prevents the proper deoxygenation of the blood, and similarly causes sugar to be present in the urine. This condition allows the carbohydrates to be converted into sugar and to pass through into the general circulation.

In the celebrated experiments of Benard, in puncturing the floor of the fourth ventricle, he also noticed a vaso-motor paralysis of the hepatic vessels. It is noticeable that in those cases of vaso-motor paralysis of the chylopoëtic system where there is a red tongue the disease is more severe, undoubtedly owing to the fact that the paralysis has extended more generally throughout the circulatory system.

In health there is only a faint trace of sugar in the blood and the urine. The latter is always a reliable index as to the amount of sugar in the blood. In diabetes the sugar reaches the blood directly, without going through the process of asssimilation in the liver. In health, sugar is stopped before it enters into the general circulation, but in diabetes it is found in the blood directly in proportion to the quantity of carbohydrates taken. Sometimes even in health there is sugar in considerable quantity in the urine, in cases where there has been taken very large quantities of the carbohydrates, showing that there is a normal limit to the assimilative power of the liver, which, if exceeded, will result in a diabetic condition. The liver is a fat- rather than a sugar-producing organ, converting animal starch into sugar and then into fat. The liver is different from other organs in that it has small arteries and large veins. The contents of the portal vein should be in a decidedly venous condition, otherwise we will get sugar into the general circulation.

Diabetes is of a neurotic origin, and it is well established that nervous conditions influence in a material manner the condition of of the patient.

In considering these cases the first thing to do is to test for sugar in the urine, and in order that we may fully appreciate the progress of the case this test should be a quantitative one.

In selecting urine for examination it is necessary to procure both an evening and a morning specimen. It frequently occurs that sugar is only present shortly after the taking into the body of carbohydrate foods. It is owing to the fact that specimens of urine are procured at different times and after different conditions of diet that physicians differ so often in the diagnosis of diabetes. Among the various tests for sugar probably the most accurate is the copper test, in the form of Fehling's solution. The great objection is that this solution will throw down a precipitate on boiling, which is very liable to mask the test. In order to obviate this he had had pellets made of the solid ingredients of this solution, in an anhydrous form, such as can be at any time dissolved in water for use.

When the patients come to us we should not ask them, but tell them, what they have been eating or drinking. This can be accurately done by the quantitative test. This is best and most easily accomplished by the decolorization test, which is done in the following way:

At the bottom of a long, graduated pipette is attached a tube running into a flask containing a given quantity of a solution of sulphate of copper, differing from Fehling's solution only in containing ammonia and potash instead of the latter alone (in order to prevent the precipitation of the oxide); at the upper part of the flask is placed an escape-tube. At the rubber tube through which the urine escapes into the flask is placed a compressor controlled by a screw, which regulates perfectly the flow of the urine. After the copper solution is brought to the boiling-point, by a flame placed underneath the flask, the urine is allowed to enter the flask, drop by drop, until the copper solution is exactly decolorized. By reading upon the graduated pipette the amount of the urine which has been necessary to decolorize the known quantity of copper solution, we can form a proportion by which an accurate estimate can be made of the contained sugar. By this means we can follow the course of the disease even more accurately than the clinician who, with his stethoscope, watches, from day to day, the progress or retrocession of pulmonary disease.

It is well to note, in passing, that in diabetes we sometimes find albumen in the urine, and this is often present just in proportion as the patient improves or gets worse. As test for albumen, which has no known fallacy, is that with citric acid and the ferrocyanide of sodium. The objections to the nitric-acid test are that it may precipitate either uric acid or the oleo-resins. In the above test, if a pellet of citric acid is dissolved in the urine and boiled, we may then get a precipitate of uric acid, but upon the addition of the ferrocyanide of sodium the solution invariably clears up unless albumen be present.

In considering the disease itself, we find it has different grades of intensity. The liver, in health, has not unlimited control in the assimilative power over the carbohydrates, and diabetes may be said to exist when that power is below the ordinary. When a person first comes to have diabetes, as we have stated, it is through faulty assimilation ; it does occur, however, that, as the disease progresses, the sugar is formed upon the tissues themselves, as is proved by its constant presence when the patient is upon a strictly meat diet.

Age influences greatly the occurrence of the disease. Out of 1,360 cases tabulated, forty-five per cent. occurred between forty and sixty years of age. Age also affects prognosis ; young subjects rarely recover, the disease ordinarily terminating in two years. In old people the prognosis is more favorable, many recovering. One reason, possibly, for the tendency of children to do badly is that they take unsatisfactory care of themselves, while elderly persons are oppositely inclined.

Diabetes sometimes commences in a very mild form, and may exist for a long time unrecognized. How do we know it is not recognized? It is said that bootblacks in hotels become expert in recognizing diabetics by the white stains on their shoes and clothing caused by stains from their urine.

Then, too, diabetes runs in families in a very marked manner. One of the most striking instances of this was in a family which came under my observation, where the grandmother. the mother and four out of her five children died of diabetes.

Recently he had found many cases beyond the middle period of life having pain in their limbs, which were formerly called neuralgia; they also have an irregular gait, somewhat ataxic. They sometimes feel as if they wanted to "gather themselves together," so that they may walk without giving their friends the impression that they have been taking too much. Again, they have the peculiar symptoms of pains in their extremities and "throughout the bones," which are much worse when they get warm in bed. This probably is, or analogous to, a peripheral neuritis.

In treating young subjects we must try merely to stay the disease; we cannot stop it. We take away the sugar, the patient temporarily improves and believes himself cured. He is borne up only by false hopes.

In young subjects it seems to have a progressive character, not unlike progressive muscular atrophy, or of locomotor ataxia.

For elderly patients we can do much. Appropriate diet is absolutely necessary. Sweets, pastry, puddings and bread must be interdicted, while meat, eggs, poultry, butter and cheese may be taken. In regard to milk, it must be remembered that it contains lactic sugar, and, therefore, also, cannot be taken.

In regard to bread, the gluten and almond breads, especially the latter, are preferable. Gluten bread may be considered of a good quality if containing only thirty-three per cent. of starch. He had found that many times patients paying a high price for their bread got an inferior quality, containing from sixty per cent. to eighty per cent. of starch. Almond is far preferable, containing fifty per cent. of fatty matter, and only seven per cent. of carbo-hydrates. It was necessary, therefore, to have the proper means with which to carry out the treatment successfully. The medicinal agents which he gave were opium, morphia and codeia. Whether due to the natural history of the disease he could not tell; but he thought they exerted a restraining influence over the disease.

If the sugar disappears from the urine he commenced to give his patients two ounces of bread daily ; if, after a few weeks or months, he still found no sugar, he gave them three ounces of bread, increasing in this manner until he gave them six ounces, with which quantity they must remain content.

If the bread causes the sugar to reappear, it must not be taken. We have seen that if there is sugar in the urine, it must be proportionately so in the general circulation. An excess of sugar in the blood predisposes to disease. The patient is then " ripe for anything wrong."

Dr. Herrick, of Cleveland, O., asked whether Dr. Pavy considered the condition of the urine the objective point in the treatment, or did he aim his treatment directly to the abnormal condition in the portal and hepatic circulation.

Dr. Pavy said that he looked upon the lessening of sugar as an evidence that the assimilative power of the carbo-hydrate is improved. The urine is an index of sugar plus the power within.

Dr. Arnold, the President, asked whether Dr. Pavy would corroborate the statement that the Hebrew race are predisposed to diabetes.

Dr. Pavy replied that while it was true they were predisposed, it was also true that they were more amenable to treatment.

Dr. Traux, of New York, asked if Dr. Pavy had found that where acetic ether was present death followed quicker.

Dr. Pavy replied that he was not a believer in acetonæmia.—*Medical Record.*

A Convenient Formula for the Treatment of Diabetes by Lithium in Pill Form.—Vigier recommends the following as more convenient than Martineau's arsenical liquid containing lithium :

℞.—Lithii carbonat., gr. iss ;
Sodii arseniat., gr. 1-25 ;
Ext. gentian, gr. ¾.
For each pill.

To be taken morning and night, and continued until sugar has disappeared from the urine.

NOTES.

Dr. Ed. Lindsay died in Greensborough 3d September, 1887.

A case of hydrophobia, the incubation of which was 1 year, 7 months and 12 days, is reported in a Russian medical journal.

Dr. Richard Whitehead, of Salisbury, N. C., has been appointed Demonstrator of Anatomy in the Medical College of the University of Virginia.—*Watchman—Morning Star.*

When vaginal pruritus is found in an elderly patient do not fail to examine the urine for sugar. Vain will be the use of antipruritics until the diet of the patient is regulated, and other treatment instituted.

Newest Treatment for Whooping-Cough.—Resorcin and cocaine sprays—2 to 8 grains cocaine to the ounce of water ; resorcin, 2 to 4 grains to the ounce of water, the cocaine spray being used every two hours, the resorcin every three hours.

Dr. Wm. A. Byrd.—The *Journal of the American Medical Association* announces the death of Dr. W. A. Byrd, of Quincy, Ill., from sunstroke. Dr. Byrd was a surgeon of great skill, and was well and favorably known by the profession in the South. His death is a sad blow to the profession.

Antipyrin and Antifebrin in "Nerve Storms."—Evidence is rapidly accumulating, says the *British Medical Journal,* that in antipyrin we have a remedy of real use in the treatment of various painful affections, especially those which are of the so-called "nervous character." Dr. John Ogilvy, Surgeon General, has found good results in cases of "bilious headache." Prof. Germain Seé finds it useful in facial neuralgia, migraine, headache, sciatica and neuritis. Dr. T. S. Robertson, of New York, gave the drug successfully in migraine, good results being noticed in from one-half to an hour. The dose is about 8 grains, given at intervals of an hour until three or four doses are given. Or a decided dose of 20 grains may be given, and repeat it in two hours if necessary. Cerebral anemia appears to be the main indication of either antipyrin or antifebrin.

ATROPINE IN HEMOPTYSIS.—The hypodermic injection of *three milligrammes* (.464 grs.) of sulphate of atropine proved effectual in obstinate cases of hemoptysis when other remedies failed.

COCAINE INJECTION INTO THE BLADDER AS A PREPARATION FOR STONE OPERATION.—Kovacs washes out the bladder with salt and water first, then a four per cent. cacaine solution is injected. Five minutes after the cocaine injection about three ounces of water are injected.

DANGER OF ANTISEPTIC DRESSINGS TO THE MANUFACTURER.—Mr. C. Am Ende, the pioneer manufacturer of antiseptic dressings in this country, calls our attention, in a private letter, to the poisoning of workmen engaged in the manufacture of bichloride dressings. He mentions that one of his employeés had a well developed case of severe corrosive sublimate poisoning, from the handling of the goods or from their preparation, though, as he says, none of them throw off any dust. He has much concern for the health of his other employeés, and hopes the profession will return to the non-poisonous antiseptics for dressings. Mr. Am Ende makes the most reliable dressings, which include catgut ligatures, plain and sublimate gauze, iodoform gauze, sponges, and the most beautiful and perfect borated and absorbent cotton.

TO WHAT EXTENT CAN WE CLASSIFY VESICAL CALCULI FOR OPERATION, ETC.—This is the caption of a very well digested article by Dr. Vaeder Veer, a continuation of which is the leading article in the *Virginia Medical Monthly* for September. It is well worth careful reading. We venture to call the attention of the author to the fact that, making up his table of Supra-pubic lithotomies, he has omitted the cases of Dr. C. W. Dulles, of Philadelphia, in the *American Journal of Medical Sciences*, July, 1875, and April, 1878, and *New York Medical Journal*, September, 1878. Another contribution on this subject was made under the pseudonym of "North Carolina Physician" (NORTH CAROLINA MEDICAL JOURNAL, Vol. II., p. 313). The author, Dr. H. T. Bahnson, of Salem, will pardon our boldness in making known its authorship, but in so doing we but bring the cases properly before students, who are not warranted in gathering statistics from unsigned contributions.

The following physicians from North Carolina were registered as members of the International Medical Congress: Drs. J. M. Baker, Tarborough; S. W. Battle, Asheville; W. J. H. Bellamy, Wilmington; —— Best, Pitt county; A. G. Carr, Durham; W. T. Cheatham, Henderson; Charles Duffy, New Bern; J. W. Faison, Mt. Olive; G. W. Graham and —— Gibbon, Charlotte; J. M. Hays, Henderson; E. B. Haywood, Raleigh; J. A. Hodges, Fayetteville; J. W. Jones, Tarborough; W. P. Mallett, Chapel Hill; J. W. McNiel, Fayetteville; J. W. Moore, Mt. Pleasant; C. J. O'Hagan, Greenville; L. J. Picöt, Littleton; N. J. Pittman, Raleigh; G. G. Thomas, Wilmington; J. H. Tucker, Henderson; W. H. Wilson, Gastonia; R. S. Young, Concord. The North Carolina contingents took Dr. R. I. Hicks into its ranks. Dr. Hicks formerly belonged to us—but his removal to Warrenton, Virginia, has taken him away bodily—and we believe that in heart and soul he is still one of us.

Is it Gelsemium or Gelseminum?—We detect the pen of the polyglot scientist, Mr. Charles Rice, editor of the *American Druggist*, in a review of the origin of the name *Gelsemium*, in reply to a correspondent who wants to know which is the correct spelling, Gelsemium or Gelseminum. The writer gives decided preference for the latter. Mr. Rice brings out some interesting learning in connection with the name of our yellow jessamin. It was Catesby who, in 1741, established the generic name Gelseminum, separating the European genus Jasminum from the American genus, and adopting the old mediæval word for jessamin. And by the way, Catesby's "Natural History of Carolina" is, in this day of wonderful picture-making, a most creditable work considered artistically, although nearly 150 years old. The University of North Carolina is the fortunate possessor of two volumes of this very rare work. But to return to Gelsemium, Jussieu, in 1789, in his "Genera Plantarum," gave a strict and rigorous characterization of the American plant, adopting the genus name *gelsemium*, omitting the *n*. Pursh, Elliott and Darby followed Catesby's spelling, but Bentham and Hooker and Gray followed the spelling of Jussieu, and so does Chapman. "Since, therefore, every botanical authority of the present day use the spelling *Gelsemium*, and since a scientific term purposely introduced and once adopted should remain unaltered, irrespective of any etymological considerations, the above is the only way the word should be written."

TWENTY advertised cures for the opium habit have been examined by Dr. Davenport, State Analyst of Massachusetts. All but one contained opium ; this one was called the " double chloride of gold," but contained no trace of gold."—*Exchange.*

INTUBATION OF LARYNX.—This is a very interesting pamphlet, containing papers by Francis Huber, M.D., Joseph O'Dwyer, M.D., W. P. Northrup, M.D., A. Caillé, M.D., Dillon Brown, M.D., Irwin W. Hance, M.D., and Prof. A. Jacobi, M.D., discussing the methods and results of intubation of the larynx as a substitute for tracheotomy, and discussing also the best plans of feeding patients during treatment. Dr. Jacobi concludes the discussion by paying a high tribute to Dr. O'Dwyer for the originality of his invention, and after admitting his previous opposition to the new surgical procedure as lately as in the third volume of Pepper's System of Medicine, he remarks that he was now, and had been, for sometime, convinced of the correctness of everything that he claimed for intubation. This collection of papers is a good statement of the present condition of intubation, and may be read with profit by any one desiring information. We presume it may be obtained from the publishers of the *Medical Record.*

ARMY SURGEONS.—An editorial in the *British Medical Journal,* on the subject of Army Surgeons and Army Surgery, is a spirited presentation of the eminent services rendered by British surgeons in time of war. It relates many touching incidents—short paragraphs from the history of army medical service—which are more lasting memorials than " storied urn or animated bust." One noble example we quote : " Read of Dr. Landon upon Majuba Hill. Mortally wounded, with the agony of death closing in, in the midst of his own pain and weakness he heard a wounded soldier shrieking aloud in his sufferings, and creeping, forgetful of self, to where this man lay, gave him a morphine injection to relieve his distress, and giving it, died ! Sir Philip Sidney did scarce as noble an act as this, for he only deprived himself of a comfort, but Landon increased his own sufferings and spent his remaining strength by his exertions. Of the like of this deed there are, indeed, few recorded in the annals of any age or country." Who will be the historian of the medical men in our late war ?

OBITUARY.

Edward Lindsay, M.D.

The 3d day of September, 1887, ended the earthly labors of the lamented Dr. Edward Lindsay.

He was born in Greensborough, N. C., on the 27th of January, 1849, and was, therefore, in his 38th year when the hand of death liberated his soul from its earthly tenement. He was a son of the late Jed. H. and Martha Lindsay, who was formerly a Miss Strange, of Kentucky. His literary education was acquired at the Universities of North Carolina and Virginia, at the latter of which he commenced the study of medicine, and graduated in this branch at the Washington University of Baltimore, on the 27th of February, 1871. He settled in Chapel Hill and married Miss Lizzie Kirkland, of that place, who, with four children, survives him. He entered there on the practice of his profession, but afterwards removed to St. Joseph, Mo., where he engaged in the drug business. After a short time, however, he returned to Greensborough, the place of his birth and early life, and began anew the general practice of medicine, in connection with the drug business, which was conducted under the firm name of Lindsay & Schenck, to the date of his death. During the last two years of his life he was Superintendent of Health for Guilford county.

Dr. Lindsay was a man of excellent nature as well as acquired abilities—a success in all his undertakings—a failure in none.

READING NOTICES.

A Reliable Liquid Pepsin.—Have used Lilly's Liquid Pepsin for the last ten years with remarkable success, and do highly recommend it to the profession. Thompkins E. Taggart, M.D.,
(Fairmount), Cincinnati, O.

G. M. Harrison, M.D., Auburn, Centre, Pa., writes:—"I have recently thoroughly tested your Lactated Food in cholera infantum, and find it the most satisfactory, in the results obtained, of all foods prescribed. In fact, the Food in my case acted as a specific. I cannot recommend it too highly."

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D.,
GEO. GILLETT THOMAS, M. D., Editors.

Number 4. Wilmington, October, 1887. Vol. 20.

ORIGINAL COMMUNICATIONS.

COMPLETE OCCLUSION OF THE ŒSOPHAGUS BY A PIECE OF MEAT, IN A CASE OF STRICTURE, RELIEVED BY TRYPSIN.

(Reported by W. H. Bobbitt, M.D., Raleigh, N. C., and K. P. Battle, Jr., M.D., Surgeon for Diseases of the Eye, Ear, Throat and Nose to St. John's Hospital and that of the Leonard Medical School, Raleigh, N. C.)

The patient was a boy, three years of age. Eighteen months ago he drank some lye, and was troubled at times thereafter with choking, but always relieved himself without treatment. No physician had been consulted, and the site and calibre of the stricture was unknown. The last attack of this kind occurred about one year ago. Until July 30 he was able to eat anything he pleased without difficulty. On that day, while eating lean ham at 9 o'clock A. M., he suddenly choked and afterwards could swallow nothing, not even water. Dr. Bobbitt was called in the afternoon. Next morning the child was seen by Dr. Bobbitt and Dr. Battle in consultation. He was very thirsty and greedily attempted to drink water whenever it was offered him. He would take two or three mouthfuls and the act of swallowing would seem to be almost complete when the water would be returned, escaping through mouth and nose. This was generally followed by attempts at vomiting, which unfortunately could not dislodge the meat. He made no complaint of pain, but on being questioned on that point he would put his hand to the region of the larynx and at times to the stomach. There was no difficulty of breathing. On making an examination there was no obstruction could be felt by the finger. No œsophageal bougies being at hand, a soft rubber catheter, No. 12 E, was used and was stopped at a point several inches down the œsophagus. Smaller sizes were tried, but none would go further than the first. Mackenzie's œsophageal forceps was then introduced without difficulty to the obstruction. By pressing forward its point it could be felt in the depression just above the manubrium. Small shreds of ham fibre were brought up on closing and withdrawing the forceps, but the stricture could not be cleared by repeated efforts. As the patient was becoming exhausted, and we did not have at hand a wire for stiffening the catheters, further attempts were postponed to the afternoon. The suffering of the little patient for want of water, when next seen, was distressing. He was continually asking for it, and on trying to drink the result was always as before. He was naturally weaker than in the morning. A curved stiff wire was now inserted into a soft catheter, and endeavors were made to force the morsel past the stricture into the stomach without success. The same result followed the further use of the forceps. Apomorphia hypodermically was considered and put aside from fear of its depressing effect in the patient's weakened condition, and because, the stomach having been empty for so many hours, efforts at vomiting were likely to prove as abortive as before.

Acting upon a hint furnished by the report of a case, quoted by Mackenzie,* in which pepsin was thought te have digested a "large soft substance" that had become impacted in the gullet, we had previous to this visit provided ourselves with an ounce of the trypsin mixture of Fairchild Brothers & Foster :

---

*Diseases of the Throat and Nose. Vol. II,, p. 195.

℞.—Trypsin (Fairchild)........................ gr. xxx
Sod. bicarb.................................. gr. x
Aq. destil.................................... ℥ i
M.

Having witnessed the digestive power of this mixture upon fibrin, it seemed reasonable to hope that it would digest the meat and relieve the obstruction. We determined to make the attempt. On account of regurgitation the difficulty would be to keep enough of the fluid in contact with the meat a sufficient length of time. To make sure that it should reach the desired place, a small quantity of it was injected by means of an ear syringe through rubber tube previously introduced down to the stricture. To prevent its immediate regurgitation this was held in place more than ten minutes, the child of course protesting as vigorously as the presence of the tube and a gag in his mouth would admit. There being a limit to his endurance, the tube was not held in place longer, as would have been desirable. After the child had rested the stiffened catheter was again tried, but could not be pushed into the stomach with the amount of force that it was thought advisable to use. A nutritive enema was ordered and three-fourths of a teaspoonful of the trypsin mixture was directed to be given every hour, with the expectation that a small proportion of it at least would remain in contact with the meat, and the patient was left for the night.

At 9 o'clock the next morning, when the child attempted to drink water, he swallowed without difficulty, just forty-eight hours after the impaction of the ham. A short time afterwards he vomited, and in the water ejected was found a number of fibres of the meat. It seems justifiable to conclude that the morsel had been so digested and softened by the trypsin that it was dislodged by the swallowing of the water.

The Chinese and Cold Baths.—In the northern parts of China it is the custom to use only warm water for bathing purposes, and an attempt, which was made not long ago, to induce the people to use cold water, for the face, at least, on the ground that it was more conducive to health, was strenuously opposed by the people, who are accustomed to look on cold water as a medicinal agent, and to be used only in cases of great necessity.—*Medical Record.*

INTERNATIONAL MEDICAL CONGRESS.

Dr. Charles T. Parkes, of Chicago, presented a paper on

GUNSHOT WOUNDS OF THE ABDOMEN.

No subject has interested surgeons, he said, more than the treatment of penetrating wounds of the abdomen. In 1885 the whole number of recorded cases of operation for gunshot wounds of the intestine was but six. Since 1885 thirty-eight cases have been recorded with eleven recoveries, and surgical interference in appropriate cases is now the generally accepted view. The condition and appearance of the internal wound give some indication as to the presence or absence of penetration. A single wound of the abdomen affords a hope that the penetration has not taken place, but it is only a hope. Even the presence of a wound of entrance and exit does not positively indicate injury of the viscera. If there is a tract of tenderness continuous from the wound of entrance some distance, it is fair to infer that penetration does not exist. A large bullet-hole indicates penetration. When in doubt the wound of entrance should be enlarged. In this way the presence or absence of penetration can be determined, and with the usual precautions this does not increase the dangers.

In diagnosis much value cannot be attached to the subjective sensations. The unusually rapid appearance of tympanites in a region ordinarily dull, would indicate escape of gas into the abdominal cavity. Localized dullness in the region of the wound or in the dependent portion of the abdomen would indicate hemorrhage. The presence of blood in the urine indicates wound of the kidney, bladder or ureter. Shock cannot be relied upon, but when present the probability of such injury is very great. The rare phenemenon of feces in the wound is a positive sign of perforation. The presence of persistent nausea and vomiting also points to injury of the viscera. The absence of pulsation in one femoral vein indicates injury of the iliac vessel. Two cases were then reported.

In the treatment of gunshot injuries of the abdomen, incision in the median line is better in the majority of cases. There are exceptional cases in which enlargement of the original wound answers the purpose. The continuous suture answers every purpose, and as it can be inserted more rapidly than the Lembert, it is preferable.

Silk is preferable to catgut in making the sutures. Where resection is required, two methods of procedure may be adopted. In cases where the mesenteric border cannot be saved, section should be made through the healthy bowel, and a triangular portion of the mesentery also removed. The two portions of the bowel are then brought together and secured with sutures, the first suture being introduced at the junction of the mesentery and intestine. In no case had he found it necessary to use more than one row of sutures. All raw surfaces should be covered with peritoneum. The second method is applicable in cases where the mesenteric border is not injured. In these cases the section does not involve the mesenteric border of the intestine. The injured portion is alone removed and the edges of the healthy bowel brought together with the continuous suture. Where the omentum is injured the hemorrhage is often severe, requiring the removal of a large portion of the structure. All slits and lacerations in the omentum should be closed by sutures. In perforation of the stomach there is no difficulty in closing the wound after it is found. Where there is no complication wounds of the stomach usually heal satisfactorily. In gunshot wounds of the liver the surfaces should be brought together by deep sutures. The same procedure may be employed in the case of the spleen, but where this organ is badly lacerated extirpation is indicated. Perforating wounds of the kidney call for extirpation. Perforation of the liver, spleen or kidneys with a similar injury of the small intestine greatly increases the gravity of the case, and such cases will usually end fatally. Wounds of the bladder call for suture.

Special stress was laid on the necessity of seeking out all wounded blood-vessels, thus preventing the danger of primary or secondary hemorrhage. There should be a careful search made for all wounds of the intestine, the bowel being examined in a systematic manner. Tight sutures should be avoided, for these will lead to sloughing and extravasation. If the peritoneal surfaces are laid in contact and kept there for a few hours, adhesions will take place.

Dr. N. Senn, of Milwaukee, then read

AN EXPERIMENTAL CONTRIBUTION TO INTESTINAL SURGERY, WITH SPECIAL REFERENCE TO THE TREATMENT OF INTESTINAL OBSTRUCTION.

The indications in the treatment of intestinal obstruction are to remove or render harmless the cause of the obstruction, and the immediate restoration of the continuity of the intestinal canal. Where the cause cannot be removed, it is to be rendered harmless by forming an anastomosis between the portion of bowel below and that above. One hundred and fifty operations were performed on animals. The principal forms of intestinal obstruction were produced artificially, and the attempt was made to devise some new operation whereby the obstruction may be relieved when the removal of the cause is not possible. The length of time required in the performance of most of the present operations is their great contraindication. By simplifying the method of operation, the author had been able to lessen the time required. To prevent extravasation during the progress of the operation, the author had employed a narrow rubber band tied around the intestine with sufficient force to occlude it. He had never observed any injurious effects following the use of elastic compression.

The study was first directed to simple *stenosis*, which was produced by cutting out a semilunar portion of the bowel. (*a*) Traumatic stenosis from this cause becomes a source of danger from obstruction or perforation where the lumen of the bowel is reduced more than one-half. Where excision of the bowel is required for injury not more than one-half should be taken away. If more is required, circular excision should be resorted to. Longitudinal suturing of wounds on the mesenteric side of the intestine should never be practised, as such a procedure is invariably followed by gangrene and perforation, through interference with the blood supply of the portion of bowel corresponding to the mesenteric defect. (*b*) In circular constriction of the bowel, the immediate cause of gangrene of a loop of intestine is obstruction to the venous circulation, and takes place first at a point most remote from the cause of the obstruction.

Flexion (*a*) produced by partial enterectomy and transverse suturing of the wound. On the convex surface of the bowel a defect an inch in width can be closed by transverse suturing with out causing obstruction by flexion. In such cases the stenosis is subsequently corrected by a compensating bulging of the mesenteric side of the bowel. Closing a wound of such dimensions on the mesenteric side of the bowel by transverse suture, may give rise to intestinal obstruction by flexion, and to gangrene and perforation by seriously impairing the blood supply to, and venous return from, the portion of bowel corresponding with the mesenteric defect. (*b*) Flexion caused by inflammatory and other extrinsic causes, gives rise to intestinal obstruction only in case the functional capacity of the flexed portion of the bowel has been diminished or suspended by the causes which have produced the flexion, or by subsequent causes independently of the flexion.

Volvulus, as in flexion, gives rise to symptoms of obstruction when the causes which have given rise to a rotation upon its axis of a loop of bowel, have at the same time produced an impairment or suspension of peristalsis in the portion of bowel which constitutes the volvulus, or when a diminution or suspension of peristalsis follows in consequence of the rotation.

Invagination.—Accumulation of intestinal contents above the seat of invagination, is one of the most important factors in preventing spontaneous disinvagination and in inducing gangrene of the intussuscipiens. Spontaneous reduction is not more frequent in ascending than in descending invagination. The immediate cause of gangrene is obstruction to the return of venous blood by constriction at the neck of the intussuscipiens. Ileo-cæcal invagination, when recent, can frequently be reduced by distentions of the colon and rectum with water, but this method of reduction must be practised with great care and gentleness, as over-distention of the colon and rectum is productive of multiple-longitudinal lacerations of the peritoneal coat, an accident which is followed by the gravest consequences. The competency of the ileo-cæcal valve can only be overcome by over-distention of the cæcum, and is effected by a mechanical separation of the margins of the valve, consequently it is imprudent to attempt treatment of intestinal obstruction beyond the ileo-cæcal valve by injections per rectum.

In a study of the effects of *enterectomy*, it was found that in dogs resection of more than six feet of the small intestine was uniformly fatal, the cause usually being the immediate effects of the trauma. Resection of more than four feet is incompatible with normal digestion, absorption and nutrition, and often results in death from marasmus. In cases of extensive intestinal resection, the remaining portion of the intestinal tract undergoes compensatory hypertrophy.

It was also found that *physiological exclusion* of an extensive portion of the intestinal tract, does not impair digestion, absorption and nutrition as seriously as the removal of a similar portion by resection. Fecal accumulation does not take place in the excluded portion of the intestinal canal, which undergoes atrophy.

Objection was made to the various forms of suture used in *circular enterorrhaphy* for three reasons : first, time required for their insertion ; second, the danger of puncturing the bowel ; and third, the interference with nutrition which they cause. The author recommends a modification of Jobert's invagination suture by lining the intussusceptum with a thin flexible rubber ring, and the substitution of catgut for silk sutures is preferable to Czerny-Lembert sutures.

The line of suturing, or neck of intussuscipiens should be covered by a flap, or graft of omentum in all cases of circular resection, as this procedure furnishes an additional protection against perforation. In circular enterorrhaphy continuity of the peritoneal surface should be secured where the mesentery is detached by uniting the peritoneum with a fine catgut suture before the bowel is united, as this modification of the ordinary method furnishes better security against perforation on the mesenteric side.

Intestinal Anastomosis.—The formation of a fistulous communication between the bowel above and below the seat of obstruction should take the place of resection and circular enterorrhaphy in all cases where it is impossible, or impracticable to remove the cause of obstruction, or where the pathological conditions which have given rise to the obstruction do not constitute an intrinsic source of danger. Gastro-enterostomy and jejuno-ileostomy should always be made by approximation with partially or completely decalcified perforated bone plates.

In making an intestinal anastomosis for obstructions in the cæcum, or colon, the communication above and below the seat of obstruction can be established by apposition with decalcified perforated bone plates, or by lateral implantation of the ileum into the colon or rectum. An ileo-colostomy, or ileo-rectostomy by approximation with decalcified perforated bone plates or lateral implantation, should be done in all cases of irreducible ileo-cæcal invaginations, where the local signs do not indicate the existence or occurrence of gangrene and perforation. In all cases of threatened gangrene and perforation the invaginated portion should be excised, both ends of the bowel closed, and the continuity of the intestinal canal restored by making an ileo-colostomy by approximation with perforated decalcified bone plates, or by lateral implantation. The restoration of the continuity of the intestinal canal by perforated approximation plates or lateral implantation, should be resorted to in all cases where circular enterorrhaphy is impossible, on account of the difference in the size of the lumina of the two ends of the bowel.

In cases of multiple gunshot wounds of the intestines involving the lateral or convex side of the bowel, the formation of intestinal anastomosis by perforated decalcified bone plates should be preferred to suturing, as this procedure is equally, if not more safe, and requires less time.

Adhesion Experiments.—Definitive healing of an intestinal wound is only completed after the formation of a network of new vessels in the product of tissue proliferation from the approximated serous surfaces. Under favorable circumstances, quite firm adhesions are formed between the peritoneal surfaces within six to twelve hours, which effectually resist the pressure from within outward. Scarification of the peritoneum at the seat of approximation hastens the formation of adhesions and the definitive healing of intestinal wounds. Omental grafts, from one to two inches in width, and sufficiently long to encircle the bowel completely, retain their vitality, become firmly adherent in from twelve to eighteen hours, and are freely supplied with blood-vessels in from twenty-four to forty-eight hours. Omental transplantation, or omental grafting, should be done in every circular resection, or suturing of large intestinal wounds, as this procedure favors the healing of the visceral wound, and furnishes an additional protection against perforation.

Dr. Nathan Bozeman, of New York, read a paper upon

THE GRADUAL PREPARATORY TREATMENT OF THE COMPLICATIONS OF URINARY AND FECAL FISTULAS IN WOMEN,

including a special consideration of the treatment of pyelitis by a new method, and the prevention of the evils of incontinence of urine by a new system of drainage. He referred at length to his well-known method of preparatory treatment for operation upon fistulas of various kinds and various degrees of severity, exhibiting and explaining the appliances which he is in the habit of using for producing dilatation and removing adhesive bands. The great difficulty has been hitherto so to control the escape of urine that its annoying and injurious effects could be obviated He believed that that question was now solved by the use of a combined dilator and urinal, consisting in a hollow metallic receptacle, perforated with a few holes upon its upper surface, and provided with a long rubber tube which projects from the vagina. This instrument may be considered as supplemental to, or developed from, the hard-rubber vaginal dilators and the soft-sponge bag dilators which he has been using for many years. This method of treatment has been recently extended by him to certain cases in which, in addition to an urethro-vaginal fistula, pyelitis had also developed. Several ingeniously constructed probes and catheters were shown, by means of which he had been able to explore the ureter even to the pelvis of the kidney, to complete a diagnosis of pyelitis, and, by irrigation of the diseased organ, to bring about great improvement in the patient's condition. The operative procedure for accomplishing this end he has termed kolpo-uretero-cystotomy. He summarized his views as follows:

1. That the importance of the complications of fistula in the female has not been sufficiently appreciated.

2. Kolpo-kleisis is an unjustifiable operation, and leads to cystitis, pyelitis, etc-

3. The combination of drainage with dilatation as here expounded is believed to be productive of most useful results.

4. Some form of drainage is suitable for every case in which a vesico-vaginal fistula exists.

5. For such cases drainage will prove a means of great relief.

6. It is believed that this method of operation will prove of great service in the treatment of pyelitis and some other renal diseases.

Dr. Graily Hewitt, of London, in opening the discussion, made a graceful allusion to the pleasure he had experienced in being in America at this time, and generously gave full credit to American gynecologists for the work which they had done. He considered that Dr. Bozeman's paper marked a distinct advance in the treatment of urinary fistulas; and the suggested operation for pyelitis was directly in the line of conservative surgery, and an improvement upon nephrotomy or nephrectomy.

Dr. Addinell Hewson, of Philadelphia, referred to his satisfactory experience in the use of the author's method of dilatation in the preparatory treatment of fistulas. He had also derived great advantage from the injection of a current of carbonic acid gas highly charged with sulphuretted hydrogen (exactly the same treatment that is followed in Bergeon's method of treating pulmonary phthisis *per rectum*) into the vagina and bladder. The treatment was usually continued for twenty minutes at a time, and satisfactory dilatation resulted.

Dr. Wathen, of Louisville, read a paper on

RAPID DILATATION OF THE CERVIX,

stating at the outset his predilection in favor of this operation by means of steel dilators, especially in the treatment of dysmenorrhœa and sterility. Tents of all kinds were believed to be more or less unsafe, and a two-bladed instrument was preferred to bougies or any other form of instrument for this purpose. The operation should always be done with the greatest regard to antisepsis, and in case the dilatation is to exceed three-quarters of an inch, general anæsthesia to a moderate degree should be first produced. The form of dilator which he used had parallel blades which were thickened at the tips, and enabled one to dilate as thoroughly at the os internum as at the os externum, the blades not giving or springing, and thus producing unequal dilatation, as is too apt to be the case with such instruments as Goodell's, for example. He considered that this method of operation could be substituted for other means in almost every case in which dilatation is indicated.

Dr. A. Martin, of Berlin, in opening the discussion, sketched the development of the idea of dilatation since it was first propounded by Simpson, forty years ago, and alluded to the great changes which had occurred to the operation during that period. He quite approved of the author's idea of making the dilatation ample at the os internum, if it were done at all. For himself, however, he did not see the necessity for doing the operation frequently. The womb could be explored after slight dilatation, perhaps with the finger, and the curette could then be used if the question were one of diagnosis as to the character of the endometrium. He sometimes had occasion to divide the cervix with a knife, after which the interior of the organ could be explored, and the wound then closed as in the ordinary Emmet operation.

Dr. Weeks, of Portland, Me., thought the operation contraindiscated in cases in which there was faulty condition of the ovarie-

and tubes. It was not an operation which was devoid of danger. He had lost a patient who was seized with acute peritonitis on the fourth day after a second operation for dysmenorrhœa.

Dr. Reed, of Ohio, deprecated the general advocacy of this method of treatment.

Dr. Goelet, of New York, thought the great end to be attained was to produce dilatation to a certain degree, and then retain it by the use of a stem pessary for a sufficient length of time.

Dr. Trenholme, of Montreal, laid stress upon the statement that those cases were not suitable for operation in which there was either uterine congestion or any disease of the tubes or ovaries. The patient should be examined just after menstruation is ended, and if any of these conditions are found no operation should be done. After the operation he approved of the use of a curved stem.

Dr. Glisan, of Portland, Oregon, had always obtained satisfactory results from the operation, and without especial attention to antisepsis.

Dr. Reeves Jackson, of Chicago, deplored the frequency with which the operation is done. He thought it useless except for purposes of exploration.

Dr. Nott, of Texas, believed that the field for the proper performance of the operation was a limited one.

Dr. Burns, of Allegheny, Pa., preferred to dilate the uterus, in proper cases, with hard rubber stems, leaving them in for several days and securing proper drainage.

Dr. Balls-Headley, of Melbourne, Australia, still found Sims' operation of posterior section satisfactory in cases of stenosis attended with dyspnœa. He could not understand the great enthusiasm in America upon the subject of rapid dilatation.

Dr. Hoff, of Ohio, obtained satisfactory dilatation with tents made of the pith of the cornstalk and wrapped with absorbent cotton.

Dr. McBurney, of Detroit, found as the result of a great many measurements upon the cadaver, that dilatation was anatomically unnecessary in most cases, and believed that he accomplished the same result, namely, the relief of congestion, by the use of suitable vaginal applications.

Dr. Law, of England, still followed Sims' plan of cutting the cervix from the os internum to the os externum, keeping the wound open by means of a piece of lint laid within it, in those cases which are ordinarily treated by dilatation. During gestation, if it be desired to dilate the cervix, he uses an aseptic sponge tent.

Dr. Asdale, of Pittsburg, had never seen any bad results from the operation. He preferred steel dilators to tents. He had often seen sterility relieved by the operation.

Dr. Satterlee, of Kentucky, had never had occasion to perform the operation, believing that the same results could be obtained by vaginal applications of hot water.

Dr. Wathen, in concluding, stated that he did not hesitate to perform the operation in his office, in suitable cases. He did not accept Emmet's dictum, that there was no such thing as congestive dysmenorrhœa. If Emmet did not believe in the conditions for which the operation was required, he could not consistently do it, hence his opposition to it. He would do the operation only in cases in which equally good results could not be obtained by milder means.

Dr. T. More-Madden, of Dublin, forwarded a paper entitled

ON THE CAUSES AND TREATMENT OF BARRENNESS,

which was read by the Secretary.

It presented, in tabular form, a statement of the causes of sterility in five hundred and twenty-eight of the cases of infecundity occurring in married women, within the child-bearing period of life, that had come under his observation. The cases may be roughly divided into four classes, viz: 1st. Those in which barrenness was occasioned by sexual impotency or some physical impediment in the passages from the vulvar orifice to the ovaria. 2d. Cases of true sterility, or conceptive incapacity from deficiency congenital or acquired, structural disease, arrested developments, supra-involution, etc., of the uterus or from analogous morbid conditions of its appendages. 3d. Cases of barrenness from constitutional causes. 4th. Cases in which the causes of infecundity were apparently moral rather than physical, such as sexual incongruity, etc.

The most frequent of these causes of sterility is stenosis of the cervical canal. And, as he believes that the operative treatment of such cases, simple as it is deemed by some, requires more consideration than it generally receives, and frequently proves worse than useless from the disregard of certain details and precautions which he considers essential, he ventured to recommend the adoption of a method of procedure and the use of instruments which he had found advantageous in the curative treatment of stenosis in three hundred an eighty cases of obstructive dysmenorrhœa and sterility traceable to this cause.

The essential features of the method of treatment now referred to are the separation by cutting and simultaneous forcible expansion of the affected parts, followed by dilatation during the period of cicatrization, so as to prevent their subsequent contraction, and thus to secure the permanent patency of the previously occluded passage. To obtain this result he employs three instruments, viz: a special form of uterine director, which can, generally speaking, be introduced into any cervical canal, however narrow, and along which a serrated, triangular-guarded knife is made to travel up through the os internum; and, thirdly, a uterine dilator of great power, by which any required degree of cervical expansion may be effectually secured and accurately gauged.

The influence of uterine flexions in the prevention of pregnancy and the treatment he adopts in cases of sterility dependent thereon were described. He then dwelt on the subject of conceptive incapacity from morbid conditions of the Fallopian tubes, as he regards stenosis, as well as occlusion of these ducts by vaginitis and its results, such as hydro- and pyosalpinx, as far more common causes of sterility than is generally recognized. Moreover, he also holds that such tubal diseases may, in many instances, be efficiently dealt with without resort to the serious operative procedures, i. e., the removal of the uterine appendages, which, by some surgeons, are considered invariably necessary, and are by them so freely employed in such cases. Therefore he referred at some length to those less heroic alternative measures, such as aspiration and catheterization of the Fallopian tubes, the feasibility and the successful results of which, in appropriate cases of this kind, he has demonstrated clinically.

Dr. Gordon, of Portland, Me., believed that sterility was not often due to stenosis of the canal. Other important causes were vaginismus, a diseased uterine mucous membrane, which was usually due primarily to a displacement of the uterus, and disease of the tubes and ovaries.

Dr. Reed, of Ohio, thought that Hodge, as well as Graily Hewitt, deserved great credit for suggesting the treatment of these disorders by mechanical supports.

Dr. Graily Hewitt modestly admitted that he but took up Hodge's suggestion and applied it to anterior displacements, as Hodge had to posterior ones. Besides dilatation as a means for relieving sterility and dysmenorrhœa, the uterine canal should also be straightened, and both ends were often accomplished by the same means.

Dr. Smith, of Montreal, suggested that disease of the testicles must not be overlooked in the treatment of sterility.

Dr. Nelson, of Chicago, observed that the uterus must not only have no gross lesions, but its mucous membrane must also be susceptible of normal congestion in order to conception. Abuse of coitus was also believed to be a potent cause of sterility.—*Medical News.*

ON THE VACCINE OF YELLOW FEVER.

By Dr. Domingos Freire, Professor of Organic and Biological Chemistry in the Medical Faculty of Rio Janeiro.

In 1880 I announced that yellow fever was due to the presence of an extremely minute organism, found in the blood and deeper tissues, and also in the liquids of the secretions, which caused, by its evolution, disorders often fatal. Since that time I have continued my investigations with the view of proving the transmissibility of the microbe, and also that I might transform it into a vaccine by attenuation.

I have published papers on these different subjects, and, also, a report entitled, "Doctrine microbienne de la Fièvre jaune et les Inoculations Preventives," in which I have condensed all my ideas as to the pathogeny and prophylaxis of yellow fever. Two of these papers were made with the collaboration of Messieurs Paul Gibier and Ch. Rebourgeon, both distinguished pupils of the eminent scientist Pasteur, who were good enough to associate themselves with me during the present year while I was in Paris. Recently, at Rio Janeiro, I have continued the same investigations with Dr.

Sternberg, who was sent by the United States Government to learn the result of my work. I now only fulfil a duty in expressing my gratitude for the interest and unflagging zeal shown by this learned physician, as well as for the efficient aid which he has given me.

The theory which I advanced as to the nature and prophylaxis of yellow fever, is the first of a long series of experiments assiduously pursued for a period of seven years. I hope that this will justify my assured confidence in the facts which I have observed, not only with reference to the etiology and pathogeny of the disease, but also with regard to the practice of preventive inoculations proposed by me.

My present communication I will divide into several parts, so as methodically to embrace the somewhat miscellaneous remarks which I have to offer.

I. *Natural history of the amarillus microbe. Its classification, evolution and cultivation.* I have rejected the kingdom of the protista in attempting to classify this microbe, preferring to place it among the algæ, on the authority of scientists like Robin and Littré, Germain, St. Pierre, and others.

In 1880, when I discovered the amarillus microbe, I named it the cryptococcus xanthogenicus, because it seemed to me to have the general properties which characterize the genus cryptococcus. Recently the genus micrococcus has been created to designate the cellular or ovoid microbes, which are the cause of many infectious and contagious diseases. Many botanists, as I am informed by Dr. Pizarro, the distinguished professor of botany and zoölogy in the faculty of medicine of Rio Janeiro, consider this genus micrococcus the same as cryptococcus, the difference consisting merely in the method of reproduction, in the latter it being by spores, while the micrococci reproduce by budding.

The amarillus microbe is found in a monocellular ferm, commencing as a round point, almost imperceptible even with a magnifying power of 700 diameters, the points increasing little by little, strongly refracting the light and soon showing dark zones when the light is reflected on them at certain angles. These little cells are circular (spherical), surrounded by a grayish or black border, and contain in their interior masses of protoplasm. Reproduction, as I have many times seen, is effected, as it seems to me, by the rupture of the enveloping membrane.

The laceration of each cell may occur at a single point simulating a budding, but almost always the enveloping membrane breaks irregularly at several points. On the flaps resulting from the laceration there are seen colored viscous masses to which the germ cells adhere.

These masses attaching themselves to the débris of the destroyed cells are often arranged in an almost symmetrical manner, sometimes in the form of a pear, of a pine cone, or of a pineapple, sometimes like long and more or less flexuous chaplets. The microörganisms measure from one to one and a half micro-millimetres.

At the time of proliferation there escape from each adult cell two different pigments, one yellow, which infiltrates all the tissues and produces the icteric color which gives the disease its name; the other black, insoluble, destined to be carried into the circulatory current and to produce either capillary obstructions or blood stasis in the parenchyma of organs. The anuria is occasioned, at least in great measure, as the microscope shows, by the accumulation of microbes and their débris within the urinary canaliculi, exciting there, by their presence, colloid degeneration which transforms each uriniferous tube into a solid cord, and thus prevents the renal infiltration.

The black color of the vomited matters is due to this pigment. This seemed strange at first, but since the publication of my earliest investigations it has been found that there exists in nature a great number of microbes which have been called *chromogenic*, and have the property of manufacturing pigments of different sorts, the coloring being sometimes very striking. In support of this I will cite the dark blue pigment made by the bacillus cyanogenus, another beautiful reddish-purple color given by the micrococcus prodigiosus and the micrococcus indicus. Besides, the presence of these pigments has been confirmed by many physicians, among whom I will cite Drs. Rebourgeon, Issartier, and Prof. Artigalas, of Bordeaux.

Prof. Cornil, in his *Traité sur les Bacteries*, has reproached me for having shown, in the illustrations of my book, *Doctrine microbienne de la fièvre jaune*, masses of pigment, "for," says he, "these pigments are accidental corpuscles, and not bacteria." I know very well that these are accidental corpuscles, but it should not be forgotten that such corpuscles are correlated with the life of the amarillus microbe. Convinced that the observer has no right to correct nature, and repress what she clearly shows, I thought it my duty to place in my illustrations the pigments met with in cultures, especially as these same pigments play a very important part in the pathogeny of the disease, the two phenomena, icterus and black vomit, being the symptomatic expression of their presence in the organism of the patient.

Prof. Cornil himself has not been indifferent to the great interest which may attach to these pigmentary matters, for he mentions them several times in his treatise already cited, and has therefore repeatedly verified the pigments which I showed in my illustrations. I am happy to say that he has also confirmed the presence of the amarillus microbe in organs sent from Brazil. When I was in Paris about four months ago, I had the pleasure of receiving a visit from, that illustrious scientist in the Laboratory of Comparative Pathology of the Museum of Natural History, where I was carrying out my investigations together with Drs. Gibier and Rebourgeon. We had an opportunity of showing him liquid and solid cultures made after the methods of Pasteur and Koch, and were able to satisfy him that coloration was invariably associated with microbes which, in his treatise, he reproached me with not having shown. On this occasion he was able to compare the microbe in the fresh condition, which he had not before seen, and the dead microbe stained with the hydrochlorate of rosaniline.

I have made perfectly successful cultures of the xanthogenic microbe in beef broth, milk and gelatine solutions. I prefer gelatine solutions made, not with distilled water, but with ordinary water, because the latter contains different mineral salts, and even some organic matter useful to the microbe. All the details with reference to my method of carrying on cultures are given in the first part (Chapter III.) of my report on the *Microbian Doctrine of Yellow Fever and Preventive Inoculations,* published in Rio Janeiro in 1885.

Besides Pasteur's method of cultivating microbes, I also used with my microbe Koch's method of solid cultures. Experiment has showed me that the amarillus microbe is easily stained, much more easily than many others, by aniline colors, such as the hydrochlorate of rosaniline, methyl-violet and Bismarck-brown. In a brief paper presented a short time ago to the Académie des Sciences, we pointed this out, and Drs. Gibier and Rebourgeon showed colonies of the xanthogenic microbe stained a violet color and perfectly visible by means of a Verick microscope, eye-piece No. 3 objective, with homogeneous immersion.

We have, besides, succeeded in cultivating the same microörganism by means of the method of Koch. Placed in tubes containing gelatine which has been previously perforated by a sterilized platinum wire and charged with a little drop of culture fluid, the microörganism, kept at a temperature of from 15° to 25°, forms colonies which take the form of a nail, the head being on the surface and the point buried below in the gelatine. The gelatine liquefies little by little in an irregular manner, and the liquefaction always takes place at the superficial strata, which indicates that the microbe is aërobic.

The amarillus microbe has the property of elaborating products belonging to the class of ptomaines (leucomaines of Gautier) at the expense of the albuminoid and other matters on which it feeds. These ptomaines are very poisonous. I have made numerous experiments with them on dogs and frogs, experiments which show that these alkaloids have a remarkable influence on the sympathetic and pneumogastric nerves. Many symptoms of yellow fever will thus be plausibly explained by the profound disorders which these poisons occasion in the cardiac apparatus and the vasomotor nerves. In the cultures themselves these ptomaines are formed. Gelatine having a neutral reaction becomes markedly alkaline after the microbe has been in it a few days, and by well-known methods we can extract from these cultures ptomaines similar to those found within the body in cases of yellow fever.

II. *Inoculability of the amarillus microbe. Its attenuation.* I have made a great number of inoculation experiments upon animals in order to prove the transmissibility of the disease. I have remarked that not only do inoculations made directly with blood and with violent cultures kill rabbits and guinea-pigs in from two to ten days, but that the same result occurs when these animals are kept in an atmosphere more or less saturated with microbes. Many animals died simply from breathing the air of the laboratory where I made my experiments and autopsies. Their organs showed many specific microbes. I have placed the inoculability of the microbe beyond doubt by injections, both hypodermatic, intravenous and intravisceral. I have made many series of experiments which am happy to announce have recently been fully confirmed by Dr. Rangé, physician of the first-class in the French Navy at the Salut Islands, French Guinea. The account of these experiments was published in the *Archives de Médecine Navale* last year.

The transmission of yellow fever from individual to individual by blood which was in the first place virulent, and which loses none of its virulence by passing through different organisms, shows clearly that the agent which produces the disease is not dead matter, but living, and susceptible of reproduction by successive transmissions. This agent can be nothing else than the only abnormal element of definite form constantly and invariably associated with undoubted yellow fever cases, that is to say, the micrococcus xanthogenicus. These direct proofs having put beyond question the parasitic and contagious nature of yellow fever, I applied myself to the study of the attenuation of the microbe so as to change it into a product which might be used for vaccination.

We know that yellow fever, except in very rare cases, attacks the same individual but once, a characteristic found in almost all transmissible diseases of a virulent nature. If we succeed, however, in attenuating the cultures of the xanthogenic microbes so that they produce only such slight disturbances and changes of composition in the blood and in the tissues as will confer immunity, we shall then obtain for yellow fever the same great desideratum which we have already obtained for smallpox, for chicken cholera and for splenic fever in those animals which are susceptible to it.

Now I remarked that after a certain number of successive cultures the microbe became much less virulent, and guinea-pigs inoculated with it did not die, resisting an injection of from 50 to 100 cubic centimetres of attenuated culture fluid. They had slight fever, loss of flesh and some other symptoms, which disappeared in a few days; besides, in a great number of the animals thus vaccinated, having made a few days later an injection of virulent blood, I proved that some of them died, although the same injection killed all those not inoculated with attenuated cultures.

The vaccine is prepared as follows: The blood of a patient, dead, or about to die of yellow fever, is injected into the veins of a guinea-pig or a rabbit. A second animal of the same species is then inoculated with the blood of the first, and so on for six or seven animals. With the blood of the last cultures are made, which are transplanted at least four times; then I commence inoculations upon man, not, however, without having first ascertained, by experiments on animals, that the inoculations will not produce grave results. We thus obtain a tenth or twelfth generation from the primitive microbe, the virulence being notably diminished. The attenuation is caused by the new conditions with which the microbe is surrounded in passing through the organism of the guinea-pig, and its after-cultivation in sterilized test-tubes containing beef-broth or gelatine.

Besides this, cultures attenuate of themselves gradually under the influence of air, so that a liquid at first virulent may be inoculated without danger in from seven to ten days afterward. These cultures once attenuated preserve their attenuation indefinitely until epidemic seasons, during which their activity almost insensibly increases. I therefore undertook experiments to ascertain how to renew the virulence of the cultures, and I can now, at any time of year, whether during the epidemic period or not, keep up the virulence of these cultures, and change them at will from a toxic to an attenuated condition, and *vice versâ*, obtaining gradually the energy proper for vaccination and increasing it up to that which is infallibly fatal. I proceeded as follows in obtaining this important desideratum.

1. I practised inoculation by the hypodermatic method, injecting under the wing of pigeons or chickens 15 minims of attenuated culture fluid, used for the inoculation of patients.

2. Three hours afterward I killed the birds, in the blood of which the culture had been in a state of incubation or digestion, collecting the blood in sterilized flasks, conducting the operation with all the technical precautions necessary to prevent the introduction of foreign germs.

3. Immediately after, I inoculated small birds with this blood, allowing 5 minims to 7½ drachms weight of the animal.

All those used in this experiment died within seven days.

The experiment repeated fifteen days on *tiés* and *sanhassies* gave identical results.

4. At the autopsy I found in the bodies of the birds lesions similar to those of yellow fever, and among the appearances I would cite as of high diagnostic importance matter black as writing ink in the gizzard and intestines. The blood of these birds examined microscopically shows the microbes characteristic of the disease.

5. The blood of the chickens and pigeons killed, as stated in paragraph 2, preserved its deadly virulence for sixteen days, after which attenuation commenced.

6. Guinea-pigs inoculated with the same blood (the inoculation being intrahepatic, into the peritoneum or simply subcutaneous), even in a proportion of eight minims per one and one-quarter pounds weight of animal was also toxic, killing in from two to ten days. The anatomical lesions confirmed the diagnosis of yellow fever. The fluid of the stomach was very turbid and black, and the urine contained albumen.

7. If the blood from pigeons or chickens No. 1 is injected into one of the same species No. 2, 3, 4 or 5, the energy of the virus progressively decreases according to the number of transplantations made from one animal to another. We may thus always procure a series of cultures systematically graduated. When animals, either birds or guinea-pigs, are inoculated with attenuated cultures, they obtain the immunity of vaccination and are no longer affected by fatal virus.

8. The specific microbe having its ordinary appearance is found in every case in cultures thus graduated.

9. Confining myself for the present to the statement of these facts, I will not now attempt to explain why the microbes remain unaffected in strength for some hours within an animal organism itself insusceptible to yellow fever, this agreeing with the observations described in my last work, and recently repeated, with an identical result, by Dr. Rangé, of the French Navy.

The fact that an organism may not itself be affected by a morbid element, and may yet increase the virulence of that element, extraordinary as it may seem, may explain a great number of questions relative to the peculiarities of contagion during epidemics, as it may seem, may explain a great number of questions relative to the peculiarities of contagion during epidemics, as it may also explain many obscure circumstances relating to the hereditary transmission of various disorders.

III. *Vaccinations upon man; practical results.* Only after the long experiments already described upon the virulent power of the microbe of yellow fever, was I encouraged to inoculate the human organism with it. The first 400 vaccinations were made endermically, but I came to prefer the hypodermatic method as being much more sure and easier in practice.

The following is the method of procedure: The culture fluid is taken from the flask with every precaution against foreign germs, and preserved in small tubes containing from one to two drachms, these being sterilized by heat and stopped by emery. A few drops of the liquid are turned into a clean capsule, taken up by a Pravaz syringe, and then there is thrown under the skin a quantity varying from two to fifteen minims, according to the age of the individual. The disturbances which result from the vaccination are like the prodromes of yellow fever. They are manifested by intraorbital headache, rigors, general lassitude, with heaviness of the limbs, backache, febrile action (99.5°, 100.5°, 102.5° F.), slight epigastric pain, and sometimes nausea, or even vomiting, all lasting not longer than two or three days without the use of remedies. There is no local cause for these phenomena, for there only appears around the puncture a slight reddish areola which quickly disappears.

I shall give a résumé of the results hitherto obtained from these vaccinations. The vaccinations have been performed gratuitously, and were authorized by Ministerial Decree No. 4546, of the Brazilian Government, November 9, 1883.

During the epidemic of yellow fever which took place at Rio Janeiro in 1883 and 1884, I vaccinated 418 persons. not only before the epidemic, but while it was raging with its greatest intensity. The number of unvaccinated persons who died of yellow fever was 650. Among the veccinated persons there were *seven* who also appeared on the list as having died from the disease. Although there are serious doubts as to whether the diagnosis was correct, I will follow the counsel of my distinguished colleague, Dr. Trouessart, and not seek to suppress these rare cases of failure, especially in view of the imposing number (411) of successful vaccinations which I can put to my credit. This is an extremely favorable proportion, especially when we reflect that the patients in question belong to the working classes, and lived in *estalagens*, damp, narrow and badly ventilated chambers in the most unhealthy quarter of the city, where the mortality among the unvaccinated, especially among foreign workmen, was great.

Among the 650 unvaccinated persons who died of yellow fever (October, 1883, to June, 1884) 577 were strangers, only 73 Brazilians. Now I vaccinated 307 strangers, the Brazilians who fill up the list of 418 all came from the interior, and were therefore under the same conditions of susceptibility as strangers, the yellow fever being unknown in the interior of Brazil, and flourishing only on the sea-coast. Not one of the Brazilians vaccinated died of yellow fever.

The results obtained the next year (January to August, 1885) by means of inoculations made, not by the lancet, but by the hypodermatic method, were still more favorable. During this interval the number of deaths from yellow fever from among the unvaccinated at Rio Janeiro was 278, 200 strangers and 78 Brazilians, 44 only being born in that city. During this same period I vaccinated 3,151 persons ; 2,186 natives, and 865 strangers. Among the 2,186 natives 625 were young children of foreign parentage, consequently as susceptible as strangers themselves. During the entire epidemic not one died. The immunity was absolute.

These figures speak for themselves, I think, but this is not all, for during the last epidemic which broke out at Rio Janeiro in 1886, the statistical results confirm their eloquence.

In fact, during this period we vaccinated 3,473 persons : Brazilians, 2,763 ; strangers, 710. Of the Brazilians, 489 were of foreign parentage, all quite young, and should really be added to the 710 strangers, as presenting the same degree of susceptibility as the latter. More than this, 222 came from different provinces of the interior and the south, and were therefore in a very favorable condition for contracting the disease. There were really 1,421 vaccinated persons who should be added to those who cannot be said to be exempt from contagion by reason of residence. There remained 2,053 Brazilian subjects, age varying from a few months to sixty years. In this group a large number, by reason of age or residence in quarters most subject to the scourge, were under the most favorable conditions for becoming victims. Among those vaccinated there were but eight who died of yellow fever, one of whom had been inoculated in 1885, although during the same period the mortality from the disease among non-vaccinated persons was 1,389, thus divided : strangers, 1,079 ; Brazilians, 310.

If we recapitulate the vaccinations by the hypodermatic method during 1885 and 1886, we obtain the following result :

First vaccinations in 1886	3,473
Deaths of vaccinated persons	7
Second vaccinations in 1885	3,051
Deaths of vaccinated persons	1
Total vaccinations	6,524
Total deaths of vaccinated persons	8
Mortality of vaccinated persons	1 per cent.
Mortallty in yellow fever cases of non-vaccinated persons according to official reports for the years 1885 and 1886	1,667

Let us now arrange this so as to include the statistics of 1884, when we employed the endermic method ; we have :

Vaccinated	6,942
Deaths of vaccinated persons	15

Which gives us hardly two per cent. of mortality of vaccinated persons.

Deaths of the non-vaccinated	2,317

I here give but a short abridgement, the entire statistical details are given in a paper presented to the Academy of Sciences at Paris. Still, I think it is sufficient to show the real benefits which may result from a general use of the prophylactic method.

For all the statistical details the reader is referred to the following works:

1st. "Rapport sur les inoculations préventives de la fièvre jaune durant l'épidemie qui a regné en 1883 et 1884, à Rio Janeiro, presentè au Ministre de l'Interieur au Bresil." This report is annexed to my work entitled "Doctrine microbienne de la fièvre jaune."

2d. "Le vaccin de la fièvre jaune. Resultats statisques des inoculations préventives pratiquées avec la culture du microbe attenué, de Janvier à Août de 1885."

3d. "Statisique des vaccinations pratiquées avec la culture attenué du microbe de la fièvre jaune de Septembre, 1885, à Septembre, 1886."

I also recommend the report made by Drs. Rebourgeon, Gibier and myself to the Académie des Sciences de Paris, entitled "Résultas obtenus par l'inoculation preventive du virus attenuè de la fièvre jaune." This paper was presented and read before the Academy of Sciences by the lamented Prof. Vulpian, who introduced it with some remarks very flattering to us, thus contributing to the success of our investigations.—*Medical News.*

INGENIOUS METHOD OF REMOVING NASAL POLYPI.

By Kemp P. Battle, Jr., M.D., Raleigh, N. C.

All surgeons who have had experience in removing polypi from the posterior parts of the nasal cavities, and from the upper pharynx, must have met with cases in which it was a difficult matter to get the loop of the wire snare in position, especially when the growths were large. An experiment which I employed recently in such a case may prove of value to others. The patient had not breathed through either nostril for eleven months, and when seen by me for the first time the polypus was found, by the aid of the rhinoscopic mirror, to be growing apparently from the right nasal cavity, projecting into the upper pharynx, partly filling it, and lapping over the septum so as to obscure the view into the left cavity. It could not be seen from the anterior nares on either side, even after the use of cocaine. Its site could not be determined with accuracy, but was found afterward to be on the external wall of the right cavity. This was somewhat contracted anteriorly, and the amount of space available in which to work was limited. A four per cent. solution of cocaine was applied, and the platinum-wire loop of a snare-apparatus, connected with a galvano-cautery battery, was insinuated through the nostril, past the growth, and into the pharynx. But the wire was so small and pliable, and the polypus so large, that after trial it seemed impossible to get the loop caught around it. I failed with instruments guided by the mirror, and also with the finger hooked up behind the palate. The difficulty would have been much the same with the steel wire of the cold snare. I then took a rubber tube, two feet long and 1-12 inch in diameter, outside measurement, and threaded through it a piece of platinum wire of still greater length, leaving some of it protruding from each end. This was doubled, and the loop was pushed through the nasal cavity into the pharynx by means of a small straight throat-brush, the hairs of the brush being parted so as to act as a fork. The rubber tube being much easier to manipulate than the wire alone, owing to its elasticity and greater size, it was not difficult to get the tumor engaged in the loop by the use of the finger. The loop was drawn snugly around the pedicle, one end of the wire was held fast, and the tube was gradually pulled out of the nostril, slipping over the wire and off the other end, leaving the wire in place. The double copper tubes were then taken from the handle, the short wire previously used having been removed, and the ends of the long wire were passed through them, and the tubes slipped down the wire into the nasal cavity as far as they would go. The handle was attached to the copper tubes, the wires tightened, the circuit closed, and the pedicle cut through in the ordinary way. The polypus was about the size of a large walnut. The presence of an assistant was of value in the manipulation.—*Medical Record.*

HEPATIC CIRRHOSIS IN CHILDREN.

Dr. R. Palmer Howard, of Montreal, reports in the October number of *The American Journal of the Medical Sciences,* two cases of this rare affection in children, in which neither the use of alcohol nor the virus of syphilis can be assigned as the cause. Dr. Howard then presents a very careful study of the clinical histories of the 63 cases occurring in children before puberty of which he has been able to collect the records. As the result of this analysis he finds:

1st. That most of the established causes of the disease in adults obtain also in children, more especially the use of alcohol, present in 15.8 per cent. of the whole number; syphilis, chiefly hereditary syphilis, present in 11 per cent.; tuberculous disease of other organs than the liver, in 11 per cent.; also, but much less frequently than these, venous congestion of the liver, peritonitis, and a general tendency to connective tissue formation in the system.

2d. That syphilis occasionally tends to a diffuse interstitial hepatitis or cirrhosis, by first inducing an adhesive inflammation of the portal vein.

3d. That a general arterio-capillary fibrosis is not proved by these cases to be the usual, and probably not even a frequent, cause of hepatic cirrhosis in childhood.

4th. That more than half of the cases of hepatic cirrhosis in children do not appear to be produced by the above-mentioned well-established causes of that affection.

5th. That there is some evidence that cirrhosis of the liver may be very exceptionally induced by the acute infectious diseases—cholera, typhoid fever, measles, scarlatina, but that proof of this is wanting.

6th. That the habitual use of a stimulating diet, or the absorption of the products of faulty digestion, are probably fruitful sources of hepatic cirrhosis in children.

7th. That it is in harmony with what is known of the causes of hepatic cirrhosis to believe that the bodies known as ptomaines may be capable of exciting a cirrhotic condition, and that investigation of this subject deserves attention.

8th. That the period of childhood most likely to cirrhosis of the liver is from the ninth to the fifteenth year inclusive, but that it may be congenital, and may occur at any age after birth.

9th. That it is twice as frequent in male children as in female.

10th. That its symptoms are essentially the same in childhood as adult life.

11th. That it is frequently accompanied by pyrexia.

12th. That ascites of icterus, and frequently both together, are of common occurrence in the atrophic and hypertrophic forms.

13th. That the group of symptoms which have been referred to cholæmia or to cholesteræmia or to acholia, and even sometimes to uræmia, frequently ushers in the fatal issue of hepatic cirrhosis in children.

Intussusception—Abdominal Section—Recovery.—The following is the brief report of the case made to the Cambridge Medical Society. A boy of three years was admitted to the hospital with a history of pain, vomiting and partial obstruction for four weeks and complete for three weeks. Abdominal section was performed on the day of admission and the intussusception reduced. The patient was discharged from the hospital six weeks afterwards cured, the bowels acting regularly.—*British Medical Journal.*

CIRCULAR SUTURE OF THE INTESTINE.

NC med J (O.S.) 20:229-230, # 4, Oct. 1887.

Dr. William S. Halstead, of New York, contributes to the October number of *The American Journal of the Medical Sciences*, an elaborate experimental study of this subject, which may be summarized as follows :

It is impossible to suture the serosa alone, as advised by authors.

It is impossible to suture unfailingly the serosa and muscularis alone, unless one is familiar with the resistance offered to the point of the needle by the coats of the intestine. Furthermore, stitches which include nothing but these two coats tear out easily, and are, therefore, not to be trusted.

Each stitch should include a bit of the submucosa. A thread of this coat is much stronger than a shred of the entire thickness of the serosa and muscularis. It is not difficult to familiarize one's self with the resistance furnished by the submucosa, and it is quite as easy to include a bit of this coat in each stitch as to suture the serosa and muscularis alone.

It is unnecessary in performing circular suture of the intestine to make more than one complete row of stitches if they be of the plain-quilt variety. Unless all of the stitches of the row are applied before a single one is tied, it is impossible to preserve a straight line in the application of them.

It facilitates the operation very much to make five or six presection sutures ; the eversion of the mucous membrane, which otherwise takes place and makes the application of first-row, postsection stitches troublesome, is thus prevented. The first presection stitches should be introduced at the mesenteric border of the intestine, and at a place as free from fat as possible.

The plain-quilt stitches are to be preferred to the ordinary Lembert stitches, because (1) one row of them (the former) is sufficient for the circular suture ; (2) the knots of the first row of Lembert's stitches prevent the most accurate apposition of the opposed peritoneal surfaces ; (3) the plain-quilt stitches constrict the tissues less than the Lembert stitches ; and (4) the former tear out less easily than the latter. Madelung's cartilage-plates, which he employs partly to prevent the tearing out of the stitches, are unnecessary when a bit of the submucosa is taken up with each stitch.

The vessels of the excised intestines should be ligated by circumvection. It is not necessary to exsect a triangular piece of mesentery, and it is unadvisable to sew together the edges of the rent in the mesentery, for, in so doing, one might include small vessels which contribute to the blood-supply of the sutured parts.

Solutions of corrosive sublimate stronger than 1:20,000 should not be used for irrigation. It would be better, perhaps, to employ weaker solutions (1:30,000 or 1:40,000). The irrigation should be attended to most diligently when the stitches are being tied.

THE CONTAGIUM OF SCARLET FEVER.

This article consists of quite an exhaustive consideration of the evidence thus far brought forward regarding the specific poison of scarlatina.

The following criticisms are made upon Mr. Power's conclusion that the milk which produced the epidemic of scarlatina became infected from the disease upon the udders of the Hendon cows. Three herds became infected by sale and change of stock, the disease being in all respects identical, so far as one could judge from the descriptions.

The milk from *only one* dairy was associated with the epidemic. No contagion was carried from the other dairies. The result of inoculation of the milkers' hands was not scarlatina, but symptoms of local poisoning, with sometimes those of mild general septicæmia.

Dr. Klein found a streptococcus in the ulcers upon the udders. He inoculated calves, produced a general febrile disease, in one case fatal, and obtained the same coccus from the blood and organs. He found in the blood and organs of scarlatinal patients the same organism.

This looks certainly very plausible, but the writer's objection is that the finding of the same coccus in the two situations does not prove that it is the cause of scarlatina. There is no proof that the coccus has produced in man the disease scarlatina; and, secondly, there is wanting the proof that the disease which it has produced in animals by inoculation is scarlatina in any form.

The visceral lesions of scarlatina, even including the nephritis, are not sufficiently characteristic to enable us with certainty to distinguish it from other infectious diseases or forms of blood-poisoning.

All the symptoms and all the lesions found in Dr. Klein's animals would be sufficiently explained by septic inflammation or blood-poisoning better even than by scarlatina. Nothing comparable to the eruption and desquamation of scarlet fever was ever produced in the calves nor was ever seen in the Hendon cows.

After noticing the large number of writers who have observed micro-organisms of various kinds in scarlatina, the writer passes to the consideration of the "bacillus scarlatinæ" discovered by Edington (*vide Archives of Pediatrics* for July).

This bacillus was found in the blood in the early stages, but not late, and found in the desquamation in the later stages, but not early. It is the latter fact that gives these experiments their greatest weight.

Sufficient control experiments have not been made by Edington or others upon the bacilli of healthy skin and the skin in diseases other than scarlatina. These will doubtless soon be forthcoming.

The only absolute demonstration that Edington's bacillus is the cause of scarlatina will be that, when introduced into the blood of the human subjects, it produces the disease. Next to this in value will be that the organism is always found in the blood and organs of scarlet fever, but never elsewhere. We will be long waiting for such a position to be established. To be sure, Edington produced in animals a disease attended by erythema and followed by desquamation. This is not enough. There are many forms of erythema not scarlatinal which may even desquamate. We must see produced in animals a disease so strikingly like human scarlatina as to satisfy all clinical observers; or animals suffering from inoculation must communicate scarlatina to man. None of these criteria are as yet satisfied.

The work of Klein and Edington has opened the way, others must now step in and fill up the gaps before our knowledge on this topic can be complete.—*George Thin in British Medical Journal—Archives of Pediatrics.*

TONSILLITIS.—Let the patient wet his forefinger and dip it into powdered bicarbonate of sodium. The surface of the tonsil should be rubbed with the end of this finger every five minutes during half an hour, afterwards every hour during the same day. Three applications a day are then sufficient. The author since adopting this treatment has not had to lance a single inflamed tonsil.—*Lyon Médical.*

OPHTHALMIA NEONATORUM.

This is an abstract of a clinical lecture upon the subject, in which the lecturer urges strongly the necessity of searching for the gonococcus in all these cases. The following is an easy and rapid method: A drop of pus is placed on a glass slide and spread out by means of a second slide. Each one is then stained in an alcoholic solution of methyl blue with an equal volume of water, and allowed to remain two minutes. They are then washed in plenty of water. Each leucocyte will be seen under the microscope to have three or four nuclei, this being the special character of the disease; the increase in nuclei heralding the approach of the gonococci, which are seen as blue spherical bodies in the interior of the leucocytes. If one leucocyte so invaded can be discovered, the diagnosis can be made positively.

The indications for treatment are:

1. To clear away the agent of infection.
2. To prevent its development.
3. To destroy it where it is.

First, careful washing out is necessary, the eyelids should be everted, the conjunctiva stretched, and all the folds of its sac thoroughly syringed out with a ball syringe. The lids should then be turned back, rubbed against each other, and, after again everting, the syringing repeated. To destroy the microbes which have already penetrated into the conjunctival sac the solid or mitigated stick of nitrate of silver should be used, and the excess neutralized immediately by a salt solution.

The eye should be washed with a sublimate solution, one to six thousand, and iced water compresses kept constantly applied. Great care is necessary to prevent relapses in cases apparently cured.

As a prophylactic measure, douches of the sublimate solution, one to six thousand should be used in all labors, especially where the woman suffers from leucorrhœa.—*Gayet in the Lancet—Archives of Pediatrics.*

◆

Sting of Insects.—Castor-oil is said to be an infallible remedy for the sting of bees or other insects. It appears to counteract the poison and allay the pain as soon as applied.—*Medical Register.*

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN WILMINGTON, N. C.

THOMAS F. WOOD, M. D., Wilmington, N. C., } Editors.
GEO. GILLETT THOMAS, M. D., " }

☞ *Original communications are solicited from all parts of the country, and especially from the medical profession of* THE CAROLINAS. *Articles requiring illustrations can be promptly supplied by previous arrangement with the Editors. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to the* JOURNAL, *by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to* THOMAS F. WOOD, M. D., *P. O. Drawer* 791, *Wilmington, N. C.*

STENOCARPIN, THE NEW LOCAL ANESTHETIC.

It has not been many weeks since a new local anesthetic was announced under the name of Stenocarpin. The story was that a veterinarian in Louisiana had discovered that the leaves of a certain tree when applied to a painful wound revealed anesthetic properties. It was experimented with by several physicians and the anesthetic virtues established. There was a certain amount of mystery connected with the identity of the plant from which the drug was obtained, which can now be explained by the fact that it was to be worked up as a commercial product. We were not willing to believe that the *New Orleans Medical Journal*, with an able corps of editors, could not identify a common tree, with such a clew as the common name of "tear blanket," and the other slender botanical clew, that it has "thorns and leaves like the acacia." It appears to us now that the name and description were intended as a "blind," to give opportunity to the "discoverers" to make some headway with their business preparations.

The source of stenocarpin is no longer a mystery, if the specimens submitted to the botanist of the National Museum are of the genuine tree, as it proves to be a well-known tree *Gleditschia triacanthos*, the common honey locust, which is common in the United States, from Pennsylvania South and West. If this be the real source of stenocarpin the supply is practically inexhaustible.

It is remarkable that this principle in the Gleditschia has been discovered, and this discovery will probably lead to others, so that local anesthetics will be plentiful. More than one plant gives promise of similar properties—one of these, *Zanthoxylum Carolinianum*, Lam, which grows on the coast in the Southern States, known popularly as toothache tree, gives promise of similar anesthetic properties, although not yet demonstrated.

To return to Stenocarpin, we notice that there is already "a company" engaged in its manufacture, and its virtues are lauded beyond those of cocaine.

The *Medical Record* (October 1) gives a supplemental article by Dr. J. Herbert Claiborne, Jr., on the source of stenocarpin, coming to the conclusion that the "Tear Blanket" tree is *Gleditschia triacanthos*, as stated above, and suggesting the name *Gleditschine* for the active principle.

The leaves of the honey locust, from which gleditschine is prepared, when chewed, do not impart the peculiar sensation that coca leaves do, and altogether it is the most unlikely source from which an anesthetic might be prepared.

The illustration of the fruit and leaves in the *Medical Record* leave no doubt of the identity of the plant.

FLEAS may be "totally annihilated," according to a writer in the *Madras Mail*, by sprinkling the floor with powdered sweet flag root (*calamus aromaticus*).

TRAINED NURSES IN SMALLER COMMUNITIES.

NC MedJ (O.S.) 20: 235-236, #4, Oct 1887

The *Medical Record* (October 1) gives us an excellent article on the above subject. We have advocated the training of nurses in our North Carolina towns, but have not heard of any movement having been made to set the good work on foot. There have been some inquiries from educated young ladies who seemed interested in the matter, and the accomplishment of something practical, we trust, is not far in the future.

"The establishment of a cottage-hospital and small training-school in provincial [country] communities introduces a social factor of the utmost value. About it many isolated charitable projects can cluster wish mutual advantage. It becomes a so-called charity organization society, of which there is often as much need in small places as in large. In undertaking its foundation, local physicians can greatly increase their influence in the community. They can secure better care for their patients, and thus relieve themselves of a great deal of anxiety."—*Medical Record.*

In every community there must be educated young women whose talents do not run in the direction of housekeeping and sewing, who are not fit to be, or could not get employment as teachers, who are not eager to become wives, but whose amiable and even temper, gentle manners, earnest sympathy for the afflicted, good health and strong back would make them suitable candidates for the profession of a nurse. It is highly important that these nurses should come from the most respected portion of the community. They should have character enough to inspire confidence in their fidelity to all trusts, and not assume the rôle of doctor or interfere with the doctor's plans.

A few cases of disreputable conduct of trained nurses has come to our ears, which are sufficient, in our estimation, to advise the avoidance of trained nurses whose moral character cannot be vouched for by some responsible person. A common custom with these disreputable nurses is, on all pretexts, to give opiates to their patients to save them the trouble of night-watching. In one case an esteemed physician was nursed by one of these professional nurses. She made it appear to the attending physician that the patient needed morphia, and she was intrusted with the hypodermic syringe. The patient physician, too far gone by enfeebling disease to resist, fell into the fatal habit, and never recovered. The writer of this has several cases in his mind of just such criminal practice on the part of nurses.

We need trained nurses, and the hospitals of Wilmington, Fayetteville, Raleigh and Asheville ought to be utilized for this purpose. In Wilmington a small contribution would enable the Hospital Managers to establish a training school.

AMYLENE HYDRATE—A NEW HYPNOTIC.

We abstract from the *Therapeutic Gazette* (September) the following account of this new drug. It promises to be one of the most important of the many additions to the list of hypnotics. It was introduced by Prof. J. von Mehring. It is described as a clear, colorless liquid, with a penetrating odor, recalling camphor, oil of peppermint and paraldehyde. It has a specific gravity of 0.81. It dissolves in eight parts of water and is miscible in alcohol in all proportions. Amylene hydrate appears to be specially liable to contamination with amylic alcohol, which may be detected, if present, by the formation of valerianic acid upon oxidation with potassium bichromate and sulphuric acid.

In all, Mehring has given amylene hydrate to sixty different persons in three hundred and fifty different doses, each dose varying from 50 to 90 drops. The affections in which he employed the substance were of the most varied character—sleeplessness from nervousness, delirium tremens, phthisis, and in convalescence from various febrile diseases. Only in four cases out of all these did it prove inefficacious. Twice it was employed in whooping-cough with a favorable result, but, like chloral, it proved unreliable in producing sleep when the wakfulness was due to pain. It is said to possess a less disagreeable taste than paraldehyde, and the exhalations after taking it are not so disagreeable. From its freedom from danger and more pleasant taste, it is evidently to be preferred to either chloral or paraldehyde, even though it be' weaker, as a hypnotic, than chloral. It may be administered internally or by enemata. In sleeplessness from pain amylene hydrate may with advantage, be combined with hydrochlorate of morphine- No unpleasant after effects of any kind, according to Von Mehring, follows the employment of this substance; no nausea, vomiting, headache or disturbance of digestion.

Other hypnotics have from time to time been as highly lauded, but were found to have serious drawbacks. This may not be any better, but its prospects as yet appear very promising.

REVIEWS AND BOOK NOTICES.'

Druitt's Surgeon's Vade-Mecum. A Manual of Modern Surgery. Edited by Stanley Boyd, M.B.. B.S., etc. Twelfth Edition. Philadelphia: Lea Brothers & Co. 1887.

Those of our readers who remember Druitt's Surgery" as a text-book, when it was a small volume and the constant companion of his student days, will not recognize the present portly volume of nearly a thousand pages. Indeed, it is essentially a new book, re-written from beginning to the end. A lesson in the advance of surgery can most readily be reviewed by comparing the earlier editions of this work along "in the fifties" to the vast accumulations of theory and practice which are in vogue now, and he will at once see that it has been brought about chiefly by the teaching of Lister and his followers. Antiseptic surgery, with all its far-reaching results, has made such a quiet revolution in surgery that it is hard to realize until we have the opportunity to compare the teaching of less than a quarter of a century ago. All this addition of new matter has taken this volume out of the list of elementary text-books, and placed it side by side with the more pretentious works on the same subject.

The editor has brought his work up to the latest date, and we miss in our short perusal little material that has attained the rank of established practice. Pasteur's treatment of hydrophobia, the uses of cocaine, and all of the latest surgical triumphs. Of course it was too much to expect that Duryer's intubation of the larynx would at such an early date find its place there.

Nearly every subject which the student or practitioner would desire to consult a surgical volume for has found its place here—diseases of the eye, extraction and "stopping" of teeth, and all the little and big things which occupy the attention of the general practitioner in town or country.

The ligature of arteries is a carefully prepared section, which has been illustrated by the author with drawings from the dead subject.

The volume closes with about twenty pages of formulæ covering a broad range of practical therapeutics.

The student will find that the new Druitt is to this generation what the old one was to the former, and no higher praise need be accorded to any volume.

THE COTTON WORM.

The final report of the United States Entomological Commission on the *Cotton Worm*, with a chapter on the *Boll Worm*, is a volume of importance both to the planter and to the entomologist. That it is from the pen of Prof. Charles V. Riley, Ph.D., Entomologist of the Department of Agriculture, is sufficient to cause it to be read by a large number of our subscribers. It is a portly work of nearly 600 pages, of which 64 pages are illustrations. Although the work is so extensive, it will interest any interested in cotton, who has any taste for reading above that of trashy newspapers. Six of the illustrations are in beautiful chromo-lithographs, enabling the dullest reader to detect the pestiferous flies which infest the leaves and bolls of the cotton plant. We presume a copy may be procured from members of Congress of any of the districts, to a limited extent.

We are indebted to Hon. R. T. Bennett for our copy and for other choice volumes on scientific subjects.

DIFFERENTIAL DIAGNOSIS: A Manual of the Comparative Semiology of the More Important Diseases. By F. de Haviland Hall, M.D., Assistant Physician Westminster Hospital, London. Philadelphia: D. G. Brinton, 115 South 7th St. Edited by Frank Woodbury, M.D.

This useful volume has reached its third edition. It is, as the title indicates, a guide to diagnosis, and the student is assisted by the admirable arrangement of the text, and enabled to differentiate diseases by comparing similar ones in parallel columns. As far as we have examined the work is brought up to the latest progress in medicine, but kept within the limits of about 250 pages.

LESSONS IN GYNECOLOGY. By Wm. Goodell, A.M., M.D. Third Edition. With 112 Illustrations. Philadelphia: D. G. Brinton, 115 South 7th St.

The Lessons in Gynecology, now so well known to the medical profession, comes to us in its third edition, a large, portly volume, a welcome visitor. Delivered in the form of lectures, the style is entertaining, but loses none of its scientific accuracy. The lesson on Ovariotomy, which will be as eagerly sought by the reader who sees the work for the first time, will not disappoint. The history of the operation, the statistics, the methods of operating, the instruments to be used, the treatment of the pedicle, the toilet of the peritoneum, the drainage, the hygienics of the sick chamber are told plainly and with the emphasis of one who has had abundant experience.

Many new illustrations have been added and much new matter, and take it all in all, we count this volume indispensable in the library of the general practitioner.

PHYSICIAN'S VISITING LIST.

P. Blakiston Son & Co. have been issuing to the profession for many years a visiting list, so that it is well known to the profession. But for 1888 they have excelled themselves in the manufacture, making it more and more desirable. The prices range from $1 to $3.

EULOGY PAID TO THE DOCTORS.—If the doctors knew what a splendid eulogy that genuine Scotch genius, Robert Louis Stevenson, had paid them in the dedication to his recent volume of verse, that show him to be a poetic genius of no mean order, they would read his stories if they did not read his poetry. He says of the noble army of doctors, and however it may apply to many, it will not apply to all, it may be said with regret: "There are men and classes of men that stand above the common herd: The soldier, the sailor and the shepherd not unfrequently; the artist rarely; rarelier still, the clergyman; the physician almost as a rule. He is the flower (such as it is) of our civilization: and when that stage of man is done with, and only remembered to be marvelled at in history, he will be thought to have shared as little as any in the defects of the period, and most fully exhibited the virtues of the race. Generosity he has, such as is possible to those who practice an art, never to those who drive a trade; discretion, tested by a hundred secrets; tact, tried in a thousand embarrassments; and what are more important, Heraclean cheerfulness and courage. So it is that he brings air and cheerfulness into the sick-room, and often enough, though not so often as he wishes, healing." That is indeed a most noble tribute, and what is better, there are physicians all over the world, and in the South, and in North Cerolina, and in Wilmington, who may take to themselves the high praise that would seem to belong only to the ideal master in the healing art."—*Wilmington Star, September* 23.

NEW YORK LETTER.

METROPOLITAN MEDICAL MEDLEY.

The New Yorker interested in matters medical, has much to occupy his attention in the present aspect of affairs from a professional standpoint in the city. The colleges are all in full blast again, and with a prospect of an unusually full attendance; the various hospitals, public and private, some of which have been closed during the summer for renovation and repairs, are beginning to show signs of renewed life and activity with the advent of cooler weather. The daily programme of operations includes everything from the opening of a superficial abscess to a double ovariotomy. The visiting physician is confused with the multitude of professional riches with which he finds himself encompassed. Much interest is felt, too, on the part of both the local faculty and the laity, in the result of the recent introduction of that dreaded scourge, genuine Asiatic cholera in our midst. An emigrant ship, the Alesia, loaded with passengers from a cholera infected port of Italy, arrived off Sandy Hook some three weeks ago with several well developed cases of the disease on board. Several passengers had died on the voyage over. The ship was rigidly quarantined, the sick removed to an isolated island, the remaining passengers transferred to another island, all communication cut off to and from the city, and the result watched with anxious solicitude by all concerned. Fumigation and disinfection of ship, cargo and passengers, according to the most approved methods, has been fully carried out, but in spite of every effort on the part of the health officials, the record of deaths among the four hundred scourge-stricken passengers has been lengthened by almost a daily addition. There have been fourteen fatal cases since the vessel first reached our harbor, and there are now ten patients sick with the disease lying in the hospital on Swinburne's Island. The other passengers are still isolated on Hoffman's Island, and will not be allowed to land until all trace of the disease shall have disappeared. The vessel and crew have, however, been relieved of quarantine restrictions, and have come up into the harbor proper. The published statements with which the newspapers have been filled relative to our unwelcome visitor, based upon the official statements of the quarantine authorities, are to the effect that there is no occasion for alarm. As the most rigid isolation is observed, the season is unfavorable to an epidemic and the city of New York in a sanitary and hygienic condition so favorable as to reduce the danger to the minimum. There are some "long-headed" and carefully observant members of the medical faculty of New York, however, who are not so sanguine of immunity from a visitation next summer. Even should the disease germs brought by the Alesia undergo annihilation, there still remains the same source of danger of which she is an example. Cholera is not abating in Italy, and it has secured a foothold on other Mediterranean shores, and what is much worse for us, it has manifested its unmistakable presence upon the South American coast. The incident should serve, in any event, as an incentive to the most rigid sanitary regulation of all our ports, and an absolute, and, if necessary, arbitrary enforcement of all quarantine measures. Meantime we await the issue in suspense, and "shall see what we shall see."

DIAGNOSTIC SURGERY—CASES.

Dr. Tilt, in his monograph on the "Change of Life," in referring to the operation of ovariotomy, writes of it as an example of "American audacity." Whether or not his language would have been different had the honor of originating the operation rested with an Englishman, may be readily inferred. Viewed from the standpoint of the surgical school three or four decades past, hampered as they were with the traditions of a still more ancient school, the language might indeed meet with some justification, but in the light of recent progress and the present era of heroic advance, the expression must be considered totally inadequate. Conservative ovariotomy was merely a stepping-stone, and to-day no operative procedure can be suggested for which there cannot be found somewhere an operator and an argument in its defence. The surgeon's knife of to-day has no limit in its scope of action—no single organ has a guarantee of immunity from its touch, and the end is not yet. Abdominal section, until quite recently held in reserve as a *dernier ressort* in otherwise necessarily fatal cases, is now almost daily met with in the records of both hospital and private practice, as a perfectly justifiable means of simple diagnosis. So thoroughly have the safeguards of antisepsis and improved methods stripped the operating table of its dangers that no limit can be predicated of the surgery of the future. As evidence in support of the statements made above, the writer can cite no less than three cases of exploratory laparotomy within the past ten days, in one of which it was his good fortune to figure as "*particeps criminis*," (?) and in the other two as an interested "looker-on in Vienna."

If you are a resident physician in New York, and are so lucky as to get your name on the mail roll of the hospitals, you are notified by postal of each day's programme of operations in advance, and can arrange your plans in accordance. A postal from Mt. Sinai Hospital (which is, by the way, an institution endowed by Jews for Jews, and with a house staff all Israelites) informed me one day last week that Dr. John A. Wyeth, one of the visiting surgeons, would do an exploratory laparotomy among other operations, and I availed myself of the opportunity to be present and see what he would find. By the way, it is just a little curious how a medical term will spring into prominent popularity and retain its hold. One rarely hears of an ovariotomy now in the hospitals here in New York, or of an abdominal section, or of an oorphorectomy. It is a laparotomy for this and a laparotomy for that, and, indeed, the term is so elastic and so popular, that it is applied, with specific modifications to designate its locality, to almost all forms of abdominal section. The subject in this particular case was brought into the operating room with a history of an attack of illness beginning three or four weeks previous characterized by pain, tenderness and swelling in the right iliac region, fever, varying in degree, but never very great, with rapid and marked emaciation and debility. Family history good and previous health fair. Typhlitis, perityphlitis, obstruction, tumor of kidney and peritonitis were diagnostic suppositions, and had each formed a basis for tentative treatment, but with no appreciable benefit, nor did either of them account satisfactorily for all the conditions present. The patient had asked for an operation, and the object was a diagnosis, and if possible surgical relief. On exposure of patient a tumor-like mass could be seen filling up the right iliac region, which by palpation was found to be hard and nodulor, and apparently adherent laterally and posteriorly and slightly so anteriorly. Dr. Wyeth, after examination superficially, advanced the opinion of malignancy, in which Dr. Charles Carroll Lee, af the Woman's Hospital, who was present, concurred. The patient was put under ether, and an incision was made probably five inches in length in the median line. The tissues were carefully dissected up and divided, a digital examination made within the abdominal cavity, the growth pronounced cancerous and the cavity closed with interrupted catgut suture, under rigid antisepsis, without the removal of the growth, which was pronounced, under the circumstances, an impracticable and useless procedure. Dr. Wyeth, who is one of the originators and an honored professor of the New York Polyclinic, is one of the most minutely careful and deliberate surgeons I have ever seen operate. A prince among anatomists, he owes much of his success to his almost marvelous accumulation of anatomical knowledge. He is an advocate of thorough antisepsis, and is as punctilious as an old maid as a stickler for order in the arrangement of the paraphernalia and appointments of the operating room.

Case number two occurred in the private practice of Dr. T. C. Fuller, of W. 50th St., this city, though the operation was done at St. Elizabeth's Hospital, a private institution under Roman Catholic supervision and control, though just now involved in litigation. The patient, a married lady, had been treated by Dr. Fuller for symptoms due to pressure on the pelvic organs by a cystic tumor of the dermoid variety, according to the diagnosis of the attending physician (Dr. F.), some four months previous to the operation. Aspiration had afforded temporary relief, which had been further augmented by a vaginal incision with the introduction of a drainage-tube. During the temporary absence of Dr. Fuller from the city, another physician, who had been called in in an emergency, had resorted to measures for relief which resulted in the establishment of a septicæmic peritonitis, necessitating an immediate and radical procedure of some sort for her relief. With the consent of the patient and her family, an exploratory laparotomy was decided upon, and, with the assistance of Dr. A. H. Goelet, of 54th St., and the writer, Dr. Fuller performed the operation. The tumor, which was flaccid and compressible, lay slightly to the right of the median line, though the incision was made as usual, in a line beginning an inch or two above the pubic symphisis to within an inch of the umbilicus. The operation was done by gaslight, by the way, as the necessity for immediate interference was urgent, and chloroform was used as the anesthetic, the first time I have seen it take the place of ether as an anesthetic in more than an hundred operations seen in private and hospital practice within the past four months.

On opening the abdominal cavity a diffused redness of the peritoneum with lymph exudates in patches made manifest the suspected peritonitis, and a further examination revealed a large dermoid cyst with general adhesions (inflammatory) and apparently springing from the bottom of the pelvis in the region posterior to Douglas' *cul-de-sac.* The cyst was filled with a sero-purulent fluid intensely fetid in character, and with a mass of hair as large as an orange lying loosely in its interior. The escape of some of this fluid through an opening in the weakened cyst walls had given rise to the septic infection and peritonitis which we found. After some trouble the adhesions were broken up, the growth removed and the cavity carefully cleansed with several gallons of hot water and sponges. A drainage-tube was inserted through the vaginal opening previously made and the cavity closed according to the usual method. The dressing consisted of iodoform and bichloride gauze, covered with several layers of absorbent cotton held in place by strong, well-drawn bandages. The patient rallied nicely from the shock of the operation, but died on the third day from profound septicæmic exhaustion.

W. B. PRITCHARD,
243 W. 54th St., N. Y.

[The report of the third case of laparotomy had not come to hand when this article went to press, and will be reserved for a subsequent issue.—EDS.]

ANNALS OF GYNÆCOLOGY is the title of a new monthly review of gynæcology, obstetrics and abdominal surgery. E. W. Cushing, M.D., is the editor, with five collaborators from among the most noted specialists in New York. It is published by Rockwell & Churchill, in Boston, at $1 for the first year and $2 for the next. The first issue has a number of photographic illustrations, which will probably greatly improve as the work progresses.

CURRENT LITERATURE.

BORACIC ACID FOR STERILIZING URINE.

The two prime dangers in the operation of internal urethrotomy are urethral fever and hemorrhage, presuming, of course, that the operator has assured himself of the soundness of his patient's kidneys before operating. In a recent conversation with an eminent surgeon of one of the New York hospitals, he remarked in response to a statement that I made. that "the millenium in urethral surgery would be reached whenever the means was discovered of sterilizing the urine by internal medication." The ground for this strong statement was the fact that urethral fever, that dread of operators upon the urethra, is due to infiltration of the tissues of the body by a germ-laden urine.

About the only attempt that has, up to quite recently, been made to prevent urethral fever from following urethrotomies and kindred operations, has been the internal exhibition, prior to the operation, of quinine and the subsequent use of antiseptic injections. My remark that called forth this surgeon's statement was to the effect that we can, by the free administration of boracic acid for twenty-four hours before, and for some days subsequent to the operation, render the urine absolutely sterile, and thus, without any quinine whatever, escape all danger of urethral fever. At that time my experience with this agent thus given was hardly sufficient to warrant a positive assertion. Something less than a year ago I ordered, in a case characterized by purulent and fermenting urine, the exhibition of boracic acid in ten-grain doses. The effect for good was so immediate and striking, that I determined to use the remedy instead of quinine in my next urethrotomy, having several times previously encountered severe fever in this operation, despite the free exhibition of quinine.

In some forty subsequent urethrotomies, several for strictures of small calibre, a number under adverse circumstances, I have had but one case of urethral fever. In that case, operated upon in the practice of a neighbor physician, last month for stricture of small calibre in a negro, the attendant, by some misunderstanding, omitted the boracic acid after the first subsequent day. A violent chill, with temperature of 105° rapidly following, occurred on the third day. The bladder and urethra were at once washed out with boracic acid, and its internal exhibition in twenty-grain doses renewed. Happily the patient recovered, having served, if but in a negative way, to demonstrate the value of boracic acid as an internal antiseptic. I usually employ ten grains in compressed tablets every three hours, though as high as thirty grains every three or four hours may be given without any irritating or otherwise injurious action upon the alimentary canal. I should, of course, mention that full antiseptic precautions are always employed as regards the instruments used, and that in most cases I also wash out for several days the bladder and urethra with an ordinary hot boracic and bichloride solution—an admirable means, by the way, for arrest of hemorrhage, in addition to those already laid down in works on the treatment of stricture. The misgivings with which I formerly performed this wonderful salutary operation are wholly gone. Hemorrhage, the other danger, is growing more and more rare under improvements in instruments and operative procedure, and when it does occur is ordinarily easy of control. Cocaine, of course, has fully demonstrated its value in penile surgery. The sterilizing bath which I use for my instruments is a saturated solution of hydronapthol. It is superior for that purpose to carbolic acid.—*Dr. E. R. Palmer, American Practitioner and News.*

MEASURES FOR RELIEF OF CONGESTIVE HEADACHES.

A few years ago I treated these cases with hot alkaline sprays, gently applied, and the use of hot fomentations, combined with the usual constitutional remedies. This mode of treatment has not been altogether satisfactory, and during the past four years I have substituted for it the local abstraction of blood, for which I can allege unqualified success. In many cases there is experienced an immediate relief of the pain, and in all there is a sense of the loosening of the constriction. A simple bleeding may relieve the headache, or it may have to be repeated in a day, a week or a month. I have seen but few cases which were not permanently relieved by a bleeding repeatad from two to six times.

To produce the bleeding no cut is required. The cavernous body of the nose is simply pricked, and the blood flows freely until the excessive tension has been reduced; then it ceases. The amount of blood drawn rarely exceeds one ounce; in many cases it is less than this, and in some cases a single drachm of blood removed will give the requisite relief. In cases of excessive congestion the flow will equal several ounces before it ceases, the quantity of blood being dependent on the distension of the vessels, and this corresponds with the severity of the symptoms. From a normal membrane, or where there is no excessive vascular distension, scarcely a drop of blood will flow from a simple puncture of the membrane such as would produce a free flow in this pathological condition. In cases where the mucous membrane is thickened, a sharper puncture will be necessary to bring blood. A lance-headed probe may be used in making the puncture, although a sharp-pointed bistoury, or any pointed instrument, will answer. The probe has the advantage that it does not excite the apprehension of the patients, many of whom become nervous at the sight of a knife, and dread the idea of being cut.—*N. C. Glasgow, New York Medical Journal—Medical Analectic.*

MOLLIN.

Mollin (so-called by Canz, a pharmacist of Leipzig, who worked out the details of its manufacture) is formed by soaping lard with caustic potash solution in the cold so that seventeen per cent. of the fat remains free, then warming the mass with thirty per cent. of pure glycerine. It forms a dull whitish body, which smears well, and is yet of firm consistence, keeps unchanged, washes off readily from the skin simply by the application of water, and does not dirty the clothing. It forms an admirable base for a mercurial ointment, rubbing up quickly with equal parts of metal, and forming a cleanly ointment—an important distinction from the common blue ointment, which is an eminently dirty composition. Kirsten also speaks well of the styrax ointment, and of that made with pix liquida, but it will serve equally well as a base for all the ordinary ointments, except those used for the more acute affections. In the *Monatshefte*, 1887, No. 10, the same author recommends a Mollinum (or Mollin ointment) made up with tincture of iodine, as being far preferable to the ordinary ointment made with fat. This Mollinum Tr. Iodi he finds of most extensive use, and wonders that the tincture of iodine is so neglected by medical men. His list comprises "all inflammatory and non-inflammatory swellings of superficial parts, e. g., of the glands, periosteum, subcutaneous cellular tissue, lymph vessels, muscles and skin, certain degenerations of the skin, the abortive treatment of whitlows, boils and abscesses, chilblains, smallpox vesicles, various affections of the joints, bursa mucosa, testes, seminal cords, etc.; dislocations, sprains; absorption of exudation, as in pleurisy; subcutaneous blood effusions and extravasations, ete." The Mollinum Potassi Iodidi Kirsten intends to take the place of the useless officinal salve made up with vaseline. It is formed by adding iodide of potassium solution to Mollinum, the dose of the tincture and the salt being regulated according to the wish of the prescriber. The salt dces not decompose and liberate its iodine until it is rubbed into the skin.—*Medical Chronicle.*

A NEW REMEDY FOR BURNS.

I was called in some haste to a little child about three weeks ago, who was badly burned about the hands and face from falling on a hot stove. The burns were deep, the pain excessive, and the shock very considerable. I hastily sent to the drug store for a mixture of limewater, olive oil and carbolic acid. While waiting for this, I prepared to give the child a hypodermic injection of morphine with which to allay the agony, which was so great that convulsions seemed imminent. While I was getting ready to do this, I spied upon the shelf a bottle of Pinus Canadensis (colorless), which I had sometime before ordered to be diluted as a vaginal wash for the mother. Remembering its wonderful soothing influence in acute inflammation of the vagina, I at once concluded to try it. Taking a corner of a soft handkerchief, I rapidly painted the injured parts, when, like magic, the pain ceased. You can well imagine my surprise and delight at the result. I directed a camel's hair-brush to be purchased, and had the mother to make free applications, and the case had no other treatment save a little iodoform ointment later on. Since this I have tried it in several cases, both slight and severe, and with the same delightful results. The preparation used was made by the Rio Chemical Company, of St. Louis, Missouri.—*W. C. Wile, M.D., in Medical Register.*

◆

LITHIUM CARBONATE AND SODIUM ARSENIATE IN CARBONIC ACID WATER IN DIABETES.

Martineau recommends the following preparation: Into an apparatus such as is commonly used in Paris for extemporaneously making carbonic acid water, are put twenty centigrammes of lithium carbonate and a tablespoonful of a solution of twenty centigrammes of sodium arseniate in 500 grams of distilled water. The quantity of carbonic acid water used is about one litre. This quantity is to be drunk by the patient during each day, either by itself or mixed with ordinary wine at meals.

The simplicity of this remedy led Dr. Austin Flint to test its efficacy in certain cases of obstinate diabetes which he had under treatment. The ten cases reported led Dr. Flint to the following conclusions:

1. In the three severe cases in which the solution of lithium carbonate and sodium arseniate in carbonic acid were used, no very marked effects were observed in the few weeks during which the remedy was employed; but the treatment seems to be worthy of more extended trial, and it may be useful in mitigating the severity of a strict antidiabetic diet.

2. The so-called specifics for diabetes have little if any effect. An exception, however, may be made in favor of the arsenite of bromine, which has sometimes seemed to control, to a slight extent, the thirst, polyuria and discharge of sugar.

3. The main reliance in treatment is to be placed upon an antidiabetic diet. This has fallen somewhat into disrepute because it is seldom efficiently carried out. In no single instance, out of 99 recorded cases, did Dr. Flint find that the antidiabetic diet had been enforced.

4. Milk should be absolutely interdicted. Its influence over the progress of the disease is prompt, powerful and most injurious.

5. There are certain cases in which dietetic treatment promptly arrests the disease and keeps it under control. There are other cases in which treatment seems to be of little avail, except in possibly retarding the progress towards a fatal result. Of the ten cases reported, and now under observation, seven are amenable to treatment and three are obstinate.

6. A confirmed diabetic may be cured, in the sense that all symptoms will disappear ; but the disease is liable to return at any time under an unrestricted diet. Still, moderate care in diet will often secure immunity.

7. A patient who has once had diabetes should have his urine examined every few weeks. The glycosuria always precedes the general symptoms of the disease, and these general symptoms can generally be forestalled by proper treatment employed as soon as sugar makes its appearance in the urine.

8. As the disease returns, either from imprudences in diet or from other causes, the successive recurrences present greater and greater difficulties in the way of treatment.—*Therapeutic Gazette.*

THE TREATMENT OF GASTRALGIA.

I can tell you a drug which cures gastralgia. Before you prescribe it, however, you ought to find out if there be any prominent pathological concomitants or causal antecedents of the disorder, and deal with them. Anemia, sexual excess, over-work, work under wrong conditions, uterine discharges, masturbation, etc., must be appropriately met. But for the cure of the gastralgia something more is usually necessary. Of all the directly therapeutic results in medicine with which I am acquainted, one of the most demonstrable is that which can be produced by the suitable exhibition of arsenious acid in uncomplicated gastralgia. I give one twenty-fourth of a grain of arsenious acid, made into a pill with two grains of extract of gentian, thrice daily, between meals. The use of this remedy must be continued for a few weeks. In a case of moderate severity no other medicinal treatment is necessary. The gastralgic pains become less frequent and less severe, and recovery is steadily and surely attained. In severer cases I use some form of counter-irritation to the epigastrium, and I usually employ a rubefacient liniment of ammonia. In the severest cases vesication by a fly-blister is of service, and the blistered surface should be kept raw for some days by means of a daily dressing of savin ointment. But you must not rely upon treatment by drugs alone. Every hygienic adjuvant which tends to raise the strength of the patient is of high value in the cure of gastralgia. I especially advise you to make sure the sufferer feeds well and fully. The diet should be generous. A "dyspeptic" regimen makes a case of gastralgia worse. When you are satisfied there is no, or but slight, gastric catarrh in the gastralgia of a fairly vigorous adult, you should direct a dietary after this plan: Breakfast, bread and butter, or dry toast, with some fresh white fish, or some cold chicken or game, or mutton-chop, with a breakfast cupful of cocoa or weak tea or coffee. Dinner (1 p. m.), fresh beef or mutton, with bread, potatoes, cooked green vegetables, a fruit tart or a farinaceous pudding, with a glass of light bitter ale. Tea (5 p. m.), bread and butter or dry toast, with a small cupful of cocoa, tea, or milk and water. Supper (not later than 9 p. m.), white fish, or some cold chicken or game, or a little cold meat, with bread, and a glass of ale.—*Sir James Sawyer, in Lancet.*

TREATMENT OF ANAL FISSURE AND HÆMORRHOIDS BY GRADUAL DILATATION.

Anal fissure or irritable ulcer, according to statistics, ranks third in frequency among the diseases of the rectum, is found in the infant as well as in the octogenarian, and is due principally to the passage of hardened fæces through the sphincters. Although insignificant in character, it causes fully as much exquisite agony as any ill that human flesh is heir to. Very many simple fissures get well promptly, but where, by frequent mechanical irritation, they come to stay, it is then that beneficial treatment is desirable. Many cases will, however, refuse a radical operation, and for this reason Dr. H. O. Walker (*New York Medical Journal*, July 30, 1887) recommends the treatment of such cases by gradual dilatation. He was led to employ this process in a case which refused operation, and in which various forms of treatment by suppositories failed to produce relief. Dr. Walker in this case introduced a bi-valved rectal speculum, slightly separating the blades, and allowing them to remain *in situ* for about two minutes. This procedure was continued daily, gradually increasing the dilatation at each sitting until the blades were separated to their fullest extent—about two inches in diameter. This treatment was continued until there was an entire subsidence of all previous symptoms, with a full healing of the fissure and hæmorrhoidal tumors and disappearance of constipation; entire treatment lasting about five weeks. Dr. Walker likewise reports in detail four other cases taken from a record of upwards of fifty, which he has treated by this method, and which he considers are fair representatives of the character and results of the whole. In all of these cure was produced. In conclusion, he recommends the treatment of anal fissure and hæmorrhoids by gradual dilatation on the following grounds:

1. It is almost painless, at least after the first two or three distentions.
2. It does not tear the parts, nor does it produce pareses, as occasionally occurs after forcible dilatation.
3. Neither does it leave cicatrices that are apt to produce stricture, as in the method of hypodermic injection or ligature of hæmorrhoids.—*Therapeutic Gazette.*

◆

A NOVEL UTERINE DILATOR.—Dr. C. P. Wilkinson, of New Orleans, reports in the New Orleans *Medical and Surgical Journal* for May, 1887, an interesting case of labor delayed by rigidity of the os uteri, in which he effected dilatation by introducing into the uterus a rubber condom, upon a female catheter, and distending the former by means of a tube connected with a fountain syringe. The bag of the fountain syringe was raised about two feet. It was found that the patient could not bear an uninterrupted pressure, on account of the pain it produced, and Dr. Wilkinson imitated nature by raising the bag of the syringe during the pain, and lowering it during the intervals between the pains. By this means he made his artificial bag of water act like a natural bag of water, and even supplement the efforts of nature to produce dilatation during pains, and relieved his patient of the strain at the times during which nature relaxes her exertions.

NOTES.

We regret to learn of the death of Dr. James A. Gray, of the *Atlanta Medical and Surgical Journal.*

Nitrate of silver in gonorrhœa is an old practice revived, coming into use this time by the all-pervading germ theory. It is, of course, German.

Dr. Hubert Haywood, of Raleigh, has been promoted to be Surgeon General of the State Guard, and Dr. Julian M. Baker, of Tarborough, to be Assistant Surgeon General.

The *American Druggist* recommends a watery solution of tannic acid to remove the odor of iodoform from the hands. The tannic acid solution leaves no odor of its own and can be easily washed off.

Dr. W. C. Wile, in the *Medical Register*, recommends the frequent painting of a burnt or scalded surface with the colorless fluid extract of pinus canadensis. He claims that its use promptly quiets pain and promotes rapid cure.

We are pleased to learn that Dr. Richard Whitehead, of Salisbury, the son of the late Dr. Marcellus Whitehead, has received the appointment of Demonstrator of Anatomy at the University of Virginia. He graduated at that Institution last year, and we are informed led the class.

Dr. Amory Chapin, in the *N. Y. Medical Journal*, of October 8th, says that solutions of cocaine deteriorate, and that only fresh solutions are reliable for anæsthetic effects. The difference in the age of solutions, he thinks, may account for the different results which are obtained by observing when the drug is used for local anæsthesia.

Litholapaxy in Children.—Dr. Goldsmith tabulates 22 cases of litholapaxy (*Indian Medical Gazette, Medical Chronicle, Eng.*) ending in a cure. The great value of the operation is that the patient is practically well within 48 hours after the operation. The steps of the operation are the same as in the male adult except that the meatus urethra was incised.

Dr. von Nussbaum, of Munich, has recently performed his five-hundredth ovariotomy.

Yellow Fever at Tampa.—Surgeon General John B. Hamilton, U. S. M. H. S, in a communication to the *Medical News*, confirms the report in the daily press that the disease is yellow fever, and urges the maintenance of a guard quarantine, and every effort to diminish the number of people subject to the disease.

Dr. Valentine H. Taliaferro, a prominent physician and teacher of Atlanta, Ga., died recently at Tate's Springs, in Tennessee. He was at one time Professor of Gynecology in the Atlanta Medical College. He entered the Confederate Army as a private in 1861, and at the close of the war he was Acting Brigadier General.

Mr Richard Quain, F.R.C.S., Eng., died September 15th. He was for a long time Professor of Anatomy at University College, London, and Surgeon to the Hospital. He was the younger brother of the Dr. Jones Quain who was one of the authors of the famous Sharpey & Quain's Elements of Anatomy, and the cousin of the better known Dr. Richard Quain, the editor of the dictionary.

Medical Classics is the name of a bi-monthly journal, in which we find reprints of many of the rare and musty authors of centuries ago. Although published by a chemical company as an advertising medium of the Liebig Chemical Company, it reproduces some of the now quaint productions of Hippocrates, Sydenham and other worthies. It is published at $1.00 a year at 38 Murray St., N. Y.

A case of rupture of a fatty heart, the lesion being demonstrated by a *post-mortem* examination, is reported by Dr. Holmes, of New Jersey, in the *Medical and Surgical Reporter* of Philadelphia. The patient, a colored woman 40 years old, was found lying in semi-conscious state, with weak pulse, cold, clammy skin and slight convulsive movements of lower limbs. Morphia and whiskey were given her. She lived twenty-four hours and died suddenly. The *post-mortem* revealed a rupture of right ventricle one inch long. There was much dilatation and hypertrophy of the right heart and slight hypertrophy of the left ventricle. The reporter supposes that a clot plugged the vent from the time of the first seizure and prolonged life one day by its presence.

Pilocarpine in Puerperal Eclampsia.—Nitrate of pilocarpine gave good results in a case of puerperal eclampsia in which chloral and bromide of potassium combined with the administration of ether during the paroxysms. It was given in doses of 1-5 grain the first time, afterwards in doses of $\frac{1}{3}$ grain.

Remarkable Case of Ovarian Disease.—Dr. Wm. Alexander, of Liverpool, describes two remarkable cases of ovarian disease, one of which we note. It was one of ovarian tumor in the person of an unmarried woman, with an opening into the rectum through which it discharged occasionally. On opening the abdomen he found an irregular tumor, of firm and solid consistency, apparently adherent to the other viscera. Freeing it of adhesions, his finger came in contact with some hard substance like an artificial palate, suggesting to him the idea that she may at some time swallowed an artificial palate. The tumor was ovarian and pediculated. The pedicle was tied and the growth removed. The tumor consisted of three parts, upper, middle and lower. The upper part was a fœtal structure, an irregularly formed upper jaw, having an imperfect, hard, bony palate above, with what corresponds to a soft palate below. In the alveoli of the hard palate were seven teeth. The alveoli and teeth were imperfectly developed, several of the teeth were merely attached to the mucous-membrane of the gum. It was evidently an enclosure of part of the fœtal structure of a twin child, the palate and teeth alone arriving at a wonderful degree of maturity.—*Medical Chronicle, Manchester, Eng., October.*

Medical Chatauqua.—It is proposed in the *Medical Register* to organize a medical chatauqua. The idea is a very good one. The well-known chatauqua reading courses in history, literature and other branches of learning, have met with marked success, and have stimulated young men in the South to supplement their scanty education, and and to future study, by inculcating the habit of profitable reading. If such a plan can be organized under the direction of highly cultured medical scholars, it will do great things for the profession. As strange as it may seem, the majority of medical men are not assiduous readers. Many of them are satisfied with their attainments at college, and the same old text-books ten years after graduation will constitute their library, and in many instances they show decided signs of accumulated dust and general neglect. To medical men practising far away from the stimulating effects of competition, a course of reading under a competent scholar of an hour or more each day—and no doctor is so busy that he cannot give that much time—would not only add greatly to his stock of learning, but afford just the sort of diversion all of them need.

CHOLERA AT NEW YORK should make all of our municipal authorities alert. It is highly probable that the disease will be in this country next spring, and this warning ought to be enough to incite towns and cities in this State to *begin now to prepare* for the dread visitor. Let thorough cleansing begin in the lowly negro huts in the suburbs, and be carried on throughout the towns, and by weekly visitation and inspection push the good work until it becomes the habit of the population, from the nasty negro hut to the more refined premises of the well-to-do. In the former locations filth is open and visible, in the latter probably with a thin veneer of decency. *Let thorough cleansing and drainage precede the application of disinfectants.*

SQUIBB'S EPHEMERIS, dated October, comes to us after the long interval of eight months—it is nevertheless welcome. "The Oil of Wintergreen (Oil of Birch) as a Therapeutic Agent" is the caption of a paper by Dr. Squibb read before the King's County Medical Association. He points out the fact that most of the oil of wintergreen is really oil of birch, and should be so labelled. Doses of the oil as a substitute for salycilic acid, of ten minims four or six times a day, will produce ringing in the ears—if not, it might be increased by two minims until the desired effect is produced. It seems to be most appropriately used in milder attacks of gouty rheumatism or rheumatic gout, which are so much more numerous than cases of acute articular rheumatism. These cases occur in hundreds, and the physician who can relieve an hundred of such is of more used to the community than one who makes a successful laparotomy, and more rapidly gets a better reputation ; and besides he does more—much more, in combatting quackery and pretense. Notes on "Veratrum Viride," on "Opium Assay," on "Cascara Sagrada," on "Hydrochlorate of Cocaine," on "Fluid Extracts by Percolation," and on "Fluid Extract and Extract of Buckthorn." With due respect for the opinion of Dr. Squibb on "Cascara

Sagrada," we know by actual experience covering several years that Cascara Sagrada is by great odds the most successful and pleasant laxative which has been added to the list of medicines for so many years, especially in habitual constipation. Rhamnus Frangula, especially, is far inferior to it. There is a great prejudice amongst many manufacturers against the California buckthorn, but its value has been abundantly proven by actual practice. The writer of this in a busy practice has rarely in any single day for five years failed to make one or more prescriptions a day of the drug, and knows whereof he writes.

LAXATIVE CURRANTS.—A very agreeable purgative for children are the passulæ laxativæ, of the Danish Pharmacopœia. Four ounces of senna leaves are digested for half an hour, with eight fluid ounces of hot water, thrown on the strainer, and expressed sufficiently to make six fluid ounces, which are boiled to a syrup with twelve ounces of sugar. Pour the hot syrup over twelve ounces of well-washed currants (Corinthian raisins) and mix well with three drachms of powdered Ceylon cinnamon. The dose is one to two teaspoonfuls.—*H. M. Wilder, in the Pharmaceutical and Chemical Gazette.*

WE give place cheerfully to the note from the enterprising firm of Parke, Davis & Co.:—*Gleditschine—Will Its Claims be Substantiated?*—Dr. J. H. Claiborne, in the New York *Medical Record*, Dr. Herman Knapp, in the same journal, and Dr. Edward Jackson, of the Philadelphia *Medical News*, have recently published the results of their experience with the new local anæsthetic, improperly called stenocarpine, but which, being derived from *Gleditschia Triacanthos*, should be called Gleditschine. If the claims of these writers are substantiated by further experience, we may expect cocaine to yield its supremacy to this new claimant for anæsthetic honors. The results recorded would indicate that Gleditschine possesses greater anæstheti cpower than cocaine, and mydriatic effects exceeding those of homatropine. Those who desire to subject this drug to clinical trial, should address Parke, Davis & Co., who, we learn, are investigating its claims at their Laboratory, and who offer samples of the fluid extract, with a working bulletin descriptive of the drug, to those physicians interested in testing it, and hope soon to be able to supply the alkaloid itself.

Dr. Cazenave de la Roche has found iodide of potassium combined with cow's milk an efficient remedy for asthma. It should be given as follows: Distilled water, 150 grammes; iodide of potassium, 8 grammes. One tablespoonful of the solution in a cup of milk twice a day.—*British Medical Journal.*

Surgical Affections in Whites and Negroes.—Dr. McLane Tiffany, of Baltimore, in a paper read before the American Surgical Association, concludes that surgical affections follow different courses in the white and colored races under identical hygienic surroundings; surgical injuries and operations are better borne by negroes than by whites; surgical diseases involving the lymphatic system, especially tubercular, are more rapidly and certainly fatal in negroes than in whites; congenital deformities are rarer in negroes than in whites; the surgical differences observed are due to racial peculiarities.—*Medical Standard.*

Influence of Calomel upon the Decomposition of Bile.—Zawadsky, after a long and carefully made series of laboratory researches, cites the following conclusions: 1. Calomel has an antiseptic action upon the bile and the contents of the intestine. 2. This is explained by the transformation of the calomel in the bile and in the intestine, into Hg_2O, a transformation favored by the alkaline reaction of the contents of the intestine. 3. The characteristic color of the excrements—observed after the administration of the calomel—depends: *a*, on the one hand, upon the transformation of bilirubin (perhaps of hydro-bilirubin) into biliverdin, under the influence of Hg^2O, as per the formula:

$$\underbrace{C^{16}H_{18}N_2O_3}_{\text{Bilirubin}}+2Hg_2O=\underbrace{C_{16}H_{18}N_2O^4}_{\text{Biliverdin}}+Hg\ O+3Hg$$

with the liberation of metallic mercury; and *b*, on the other hand, of the presence of biliverden (a normal constituent of bile) which was prevented from decomposition on account of the antiseptic action of the calomel and of Hg_2O. 4. The acid reaction of the medium, as also the other unfavorable conditions of the juice, explain, probably, the absence of color in the excrements characteristic in some cases after taking calomel. (*Laboratoire pharmacolog. du Prof. Toumass*, *Wratsch*, Nos. 15 and 16, 1887; *Bull Gén. de Thérap.*, July 15, 1887.)—*Am. Jour. Pharm.*

It is said that milk charged with carbonic acid will keep an indefinite length of time.—*American Medical Journal.*

New Tænifuge.—Dr. Numa Campi, in the *Raccoglitor Medico*, highly extols the virtues of thymol as a remedy against tænia solium. In this he is only following the lead of Lewin, Federici and Vanni, all of whom have used it as a vermicide in one way or another, and with very satisfactory results. Probably the best method of exhibition, however, is that devised by Campi, which is as follows: In the evening no supper is eaten, the patient retiring after having taken a small dose of castor oil (from a half ounce to six drachms of the oil). In the morning two drachms of thymol are divided into twelve doses of ten grains each, and one dose is taken every fifteen minutes until all are ingested. Immediately after taking the last dose of thymol, another dose of castor oil, the same size as that taken the previous night, is administered. The treatment is usually rapid and energetic, the worm being expelled entire in the course of a few minutes after the last dose of oil. The thymol is best administered in *cachets*, either wafer or gelatin (the ordinary capsule), but it should not be put into the receiver until just before taking.

E. W. Germer, M.D., ex-President of the State Board of Health, died at Erie, August 22, at the age of fifty-six. He was born in Altsbrisach, Baden, Germany, and graduated in Medicine at the Vienna University in 1859. During the Baden revolution he was among the insurgents, and was severely wounded. Coming to Erie, he engaged in the practice of medicine. When the smallpox scourge developed in Erie he was nurse, physician, undertaker and clergyman. He was appointed on the State Board of Health by Governor Pattison, and was President of that body last year. He was a member of the National Board of Health, and at the last meeting of the State Board was elected to represent Pennsylvania at the International Sanitary Convention at Berlin next month. While on the State Board he was on the committee which investigated and located the cause of fever-contagions at Plymouth and Pittsburg. It was through his efforts that the grave of General Anthony Wayne was finally located.—*Medical Times.* [Dr. Germer was a frank, outspoken man, zealous as a sanitarian, of infinite humor, and his death will be a serious loss to the public health fraternity.—Eds.]

THE AMERICAN PUBLIC HEALTH ASSOCIATION.—The fifteenth annual meeting will be held in Memphis, Tennessee, on Tuesday, Wednesday, Thursday and Friday, November 8, 9, 10 and 11, 1887. The following topics have been selected by the Executive Committee for consideration: 1. "The Pollution of Water-Supplies"; 2. "The Disposal of Refuse Matter of Cities"; 3. "The Disposal of Refuse Matter of Villages, Summer Resorts and Isolated Tenements"; . "Animal Diseases Dangerous to Man." It is announced that this selection does not preclude the presentation of papers upon other subjects, and that the Secretary has already been notified that papers upon other interesting topics will be presented.

THE STENOCARPINE SENSATION—AN ATTEMPT TO IMPOSE UPON THE MEDICAL PROFESSION.—Our readers are doubtless familiar with the reports of Drs. J. H. Claiborne, Hermann Knapp and Edward Jackson, concerning the so-called new local anæsthetic, Gleditschine or Stenocarpine, which were published in the *New York Medical Record*, July 30th, August 13th and October 1st, and *Philadelphia Medical News*, September 3d, in which Gleditschine was claimed to possess remarkable anæsthetic and mydriatic properties.

It will, therefore, be of interest to them to learn that Messrs. Parke, Davis & Co. announce that an investigation at their laboratory, of a solution purporting to be a 2 per cent. solution of Gleditschine or Stenocarpine, which was supplied by Messrs. Lehn & Fink, of New York, has developed the fact that this solution, with which the experiments thus far recorded have been made, contains 6 per cent. of Cocaine and a sulphate of a salt which further experiment is likely to prove to be Atropia.

F. A. Thompson, Ph.C., also reports, after careful experiment with the leaves of Gleditschia Triacanthos, from which Gleditschine or Stenocarpine is claimed to have been derived, that they contain only an infinitesimal percentage of an amorphous alkaloid devoid of anæsthetic or mydriatic properties.

In the light of these facts it seems probable that the Stenocarpine sensation should be classed with the Hopeine fraud of malodorous memory, and that the physicians who have already published reports regarding Gleditschine or Stenocarpine have been the victims of a clever hoax.

[The facts given above are just as we feared they would be when a thorough investigation was made.—EDS.]

LIST OF NEW MEDICAL PUBLICATIONS.

Surgical Relations of the Ileo Cæcal Region. By J. McF. Gaston, M.D.

Pathology, Diagnosis and Treatment of Perforation of the Appendix Vermiformis. By J. McF. Gaston, M.D.

A Manual of Physical Diagnosis of Thoracic Diseases. By E. Darwin Hudson, Jr., A.M., M.D. New York: Wm. Wood & Co.

Lessons in Gynecology. By William Goodell, A.M., M.D. Third Edition. One Hundred and Twelve Illustrations. Philadelphia: D. G. Brinton, 115 South 7th St., 1887.

A Reference Handbook of the Medical Sciences. By various writers. Edited by Albert H. Buck, M.D. Vol. V. Wm. Wood & Co., 56 & 58 La Fayette Place, N. Y.

Cyclopœdia of Obstetrics and Gynecology. A Handbook of General Operative Gynecology. By Dr. A. Hegar and Dr. R. Kaltenbach. New York: Wm. Wood & Co. Vols. VII, VIII and IX.

Differential Diagnosis. A Manual of the Comparative Semeiology of the More Important Diseases. By F. de Haviland Hall, M.D., Assistant Physician Westminster Hospital, London. Third American Edition. Edited by Dr. Frank Woodbnry. Philadelphia: D. G. Brinton, 115 South 7th St., 1887.

According to Dr. Robert McC. Lord (*Medical Journal*), when in breech presentation the head cannot be delivered soon enough to guard against asphyxia, air may be freely admitted to the child's mouth and nostrils by gentle traction on the posterior vaginal wall with a Sim's speculum.

The New York health department has found arsenic and antimony present in the bright red-colored stockings of commerce. Both very poisonous to the skin and body when absorbed.

BOOKS AND PAMPHLETS RECEIVED.

Heating and Ventilation. By T. Clarke Miller, M. D.

The Coloring of Candies. By Erastus G. Smith, Ph.D.

Dr. Augustus J. Bowie. In Memoriam. By Dr. Levi C. Lane.

Practical Thoughts for Physicians. By G. W. H. Kemper, M.D.

The Relation of the Physician to Sanitation. By T. Clarke Miller, M.D.

Journal of the Shakspere Club of the University of North Carolina 1886–'87.

Recommendations in Regard to the Care of Infants. Pennsylvania State Board of Health.

The Technique of Tracheotomy and Intubation of the Larynx. By Charles Godwin Jennings, M.D.

Suprapubic Cystotomy for Purposes other than the Extraction of Calculus. By John H. Packard, A.M., M.D.

Progressive Spastic Ataxia (Combined Fascicular Sclerosis) and the Combined Scleroses of the Spinal Cord. By C. L. Dana, M.D.

Transactions of the Medical Association of the State of Missouri. Thirteenth Annual Session. Held at Macon City, Mo., May 10, 1887.

Transactions of the Texas State Medical Society. Nineteenth Annual Session. Held at Austin, Texas, April 26, 27, 28 and 29, 1887.

Report of Ten Cases of Aspiration of the Chest for Pleuritic Effusion (Third Series); Eight Pints of Purulent Fluid Withdrawn in One Case. By F. Peyre Porcher, M.D.

The Physician's Leisure Library, No. 3. Diarrhœa and Dysentery. Modern Views of their Pathology and Treatment. By A. B. Palmer, M.D. George S. Davis, Detroit. Price $2.50 a Year; Single Copies 25 cents.

Iritis. By A. G. Sinclair, M.D.

Intubation of the Larynx. By E. Fletcher Ingals, M.D.

Suppurative Inflammation of the Antrum. By E. Fletcher Ingals, M.D.

Rules and Regulations for the Inspection of Illuminating Oil in the State of Iowa.

Subacute Spinal Paralysis (Progressive). Case with Autopsy. By C. L. Dana, M.D.

On Some Important Points in the Treatment of Deep Urethral Stricture. By F. N. Otis, M.D.

The Care and Management of Infants and Young Children. Suggestions by the Ohio State Board of Health.

On the Existence of "Dermatitis Herpetiformis" (of Duhring) as a Distinct Disease. By L. Duncan Bulkley, A.M., M.D.

A Review of the Most Important Advances in Surgery, Medicine and Pharmacy in the Last Fifty Years. By C. W. Moore, M.D.

The Radical Cure of Retro-Displacements of the Uterus and Procidentia by Alexander's Operation and Median Corporraphy. By J. H. Kellogg, M.D.

Biology of Tumors. A Lecture Delivered at the College of Physicians and Surgeons, Chicago, Ill. By N. Senn, M.D., Ph.D. Milwaukee, Wis. *Medical Register* reprint.

The Physician's Leisure Library, No. 2. Diseases of the Heart. Vol. I. By Dujardin Beaumetz, M.D. Translated by E. P. Hurd, M.D. George S. Davis Publisher, Detroit: Price $2.50 a year; single copies 25 cents.

SANDAL WOOD OIL is recommended by Dr. E. Philbert as a remedy in renal colic, who used it himself in several attacks. Four of the usual capsules were taken for a dose, and a warm bath was used at the same time. He believes that the oil gave him great relief from one of the most painful of maladies.—*Practitioner.*

H. B. Taliaferro, M.D., Rogers' Prairie, Texas, writes: "I have used Lactated Food in several cases with the happiest results. For children suffering from bowel troubles, with or without inflammation (where they are as apt to die from starvation as the disease), it acts like a charm. In my opinion it is the best food prepared in the United States."

The Genuine Succus Alterans.—The *genuine* preparation, Succus Alterans, gives me the greatest satisfaction in the treatment of syphilis and rheumatism. I have in many such cases given the Succus alone, and I am convinced that it serves me always as the best alterant in treatment of blood diseases.

Yours respectfully,
Frederick Oberd, M.D., Hot Springs, Ark.

Bromo-Soda.—On a recent trip to Europe, on both the outward and homeward passages, I used (Warner & Co's) "Effervescing Bromo-Soda" with great success in preventing and relieving sea-sickness; the quantity given was a heaping dessert-spoonful, repeated hourly, if necessary. I believe Bromo-Soda to be a very valuable preventive and remedy for sea-sickness—it certainly was unfailing in my hands.

Wm. H. Keim, M.D.,
2015 Ridge Ave., Philad., Pa.

NORTH CAROLINA

MEDICAL JOURNAL.

THOMAS F. WOOD, M. D.,
GEO. GILLETT THOMAS, M. D., } **Editors.**

Number 5. Wilmington, November, 1887. Vol. 20

ORIGINAL COMMUNICATIONS.

EVISCERATION—PERFORMED FOR IMPACTED SHOULDER PRESENTATION.

By J. A. Faison, M.D., Mt. Olive, N. C.

As this is a subject worthy of serious consideration, from the fact of its certain mortality to children, and even under the most favorable circumstances of its fearful fatality in mothers, I feel that it cannot be too frequently discussed by medical men. I will ask for space to recount my experience in the following case :

On the evening of September 16th I was called to see Mrs, J., a multipara ; age about 22 years. On reaching the bedside I found her much exhausted from a prolonged labor and suffering with frequent attacks of syncope. I administered brandy and proceeded to make an examination. By digital examination the membranes were found pouching and shoulder presentation clearly made out. By further examination the shoulder and chest were found jammed and immovably fixed in the pelvis.

Spontaneous version was impossible, because the uniform contractions of the uterus kept the fœtus held down, a condition favored by the insufficiency of liquor amnii. As the child was quite large, it was an utter impossibility for the shoulder and head to pass together through the pelvis, hence the breech or head must be substituted for the presentation. Before rupturing the membranes I attempted version by external manipulation, in which I signally failed. Nothing, therefore, could be gained by a continuance of this method, as the presentation could never be rendered freely movable above the pelvic brim, and the necessity of the case called for rapid delivery. Chloroform was now withheld after its use proved of no avail. The patient at this stage, although under grinding pain, excited by the necessary manipulations, rallied and assumed a new power and energy. Chloroform was again administered, and I next tried the plan which was first suggested by Dr. Wright, of Cincinnati. Placing the woman on her right side, with hips raised and elevated higher than the shoulders, I introduced two fingers of my left hand, and attempted to elevate and push the shoulder towards the left side of the pelvis, whilst at the same time the right hand was engaged on the outside of the abdomen, pressing the fundus downwards and towards the right. Failing in this procedure, I determined to introduce the hand into the uterus, hunt for and bring down a foot as the alternative measure. The arm would come down. By replacing it, and at the same time pushing the hand gently forward, I was enabled to enter the uterus and carry my hand along the abdomen of the child. I carried my hand onwards in search of the knee or foot, the knee being finally gained by making pressure from above downwards. Hoping to get a foot, I still persevered, but could never get firm hold of it, as my hand was terribly cramped. My every effort was now made to accomplish version by bringing down a knee, but my fingers were so crippled by the pressure of the womb that as tractors they were powerless ; so I had to give this up as a fruitless effort. As a *dernier ressort* I began to consider the expediency of a destructive operation. Its dangers and its difficulties were laid before the husband and wife, and they agreed that the operation should be done, and declined a consultation which I asked for.

The fœtal heart-sounds were inaudible and the pulsations in the cord had ceased. Notwithstanding Playfair's teaching that "nothing is gained by amputation when the arm is completely protruded into vagina," I treated it as an offending member. Hoping to gain greater latitude, and in order to introduce instruments with more freedom, I amputated at a point quite near the axilla by making traction on the arm. The thorax was next pierced by a modification of Naegele's perforator, which was then carefully withdrawn by the side of my left hand, guarding the maternal soft parts. The crotchet was now withdrawn and the hand introduced, the diaphragm broken down and the entire viscera, both thoracic and abdominal, were broken up and removed piecemeal.

The chloroform being withdrawn, the contractions drove the collapsed fœtus forwards, doubled upon itself till the spinal column could be reached, and divided. To facilitate labor, I next divided the entire body, hooked the crotchet in the pelvic half and delivered by slight traction. As soon as I could see the cord it was divided at the umbilicus. The remaining half of the child was expelled by uterine action, which was easily completed, as in pelvic presentations. I followed down the uterus with my hand, and in about thirty minutes the womb contracted nicely and the placenta was detached and expelled by expression. She was having considerable hemorrhage before the expulsion of the placenta, but this was speedily controlled by manipulating the womb and administering a full dose of ergot.

The vagina and uterus were now thoroughly washed and syringed out with a solution of carbolic acid. The clothing and everything about the bed was changed, and I gave her quinine sulphate grs. 10, and morphine sulphate gr. ¼. I directed carbolized vaginal douches twice daily. The subsequent treatment was quinine grs. 10 daily, with fluid extract ergot ♏20 *ter die*; morphine to be used as indicated. A turpentine stupe was placed over the bowels to relieve tenderness when it appeared.

The temperature never went above 100½° F., and the woman did as well as I could wish, and is now fast gaining her strength.

I used clean hands and clean instruments in this operation, and kept her surroundings as clean as possible.

I have endeavored to give you a faithful history of this case, with my reasons and grounds for the operation. Whether version might not have been accomplished, by another and more experienced hand, I leave for others to say. If the operation must be done, it should be performed at once, while the woman possessed adequate ability.

The obstetrician should always consider as a primal duty the saving of both mother and child; but in this I had no chance for the life of the child, so my whole endeavors were cast in favor of the mother.

I lay no claims to anything new in this operation, but having performed it without help and without improved instruments, and carrying it to a successful termination and perfect recovery, I give it to the profession for what it is worth.

NCMedJ (O.S.) 20: 268, # 5, Nov 1887.

ANALYSES OF NORTH CAROLINA WINES.

By F. P. Venable, Ph.D., F.C.S., and W. B. Phillips, Ph D.

So far as we are aware no analyses of the wines produced in this State have ever been published. As the industry has grown greatly in the past few years and gives promise of still greater growth, it is manifestly of importance that these wines should be analyzed. A comparison is thus possible with the wines of other localities and our knowledge of the chemistry of wines increased. The wines were in all, save one case, furnished us direct by the makers. Where we have learned of additions made to the fermented juice of the grape, note has been made of it in the table.

Of special interest are the analyses of wines made from the native Scuppernong vine and the closely related vines—the Mish or Meisch, and Bulay. The Scuppernong is very abundant, hardy and prolific in certain sections of the State, and the problem of fermenting and blending so as to secure a good wine from it is very important.

In the accompanying table will be found analyses of nineteen varieties of wine. The analyses were carried out according to the methods recommended by the German Commission of 1884, as recorded by Barth. The figures in the last nine columns represent percentages. The percentage of alcohol is given both by weight and by volume. The "extract" is that which is generally called the "body" of the wine, and is all that portion which will not evaporate at 100°. The ash includes, of course, all mineral matter.

Two or three average analyses of foreign wines are added. They are taken from König's Nahrungs and Gemessmittel, second edition:

NORTH CAROLINA WINES.

VARIETY OF WINE.	MANUFACTURER'S ADDRESS.	Vintage.	Specific Gravity.	Alcohol by Weight.	Alcohol by Volume.	Tartaric Acid.	Acetic Acid.	Total Acid.	Sugar.	Tannin.	Extract.	Ash.
				Per Ct.	Per Ct.	Per Ct.	Per Ct.	Per Ct.	Per Ct.	Per Ct.	Per Ct.	Per Ct.
Dry Mish	G. W. Garrett & Co., Medoc, N. C.	1885	0.9957	9.51	11.81	0.655	0.014	0.699	0.60	0.020	3.162	0.122
Dry Bulay	" " "	"	0.9951	8.38	10.40	0.818	0.031	0.819	0.45	0.015	2.179	0.113
Dry Imperial—Scuppernong	" " "	"	1.0009	9.37	11.62	0.770	0.022	0.792	2.20	0.025	4.259	0.106
Dry Imperial—Scuppernong	" " "	1884	0.9919	9.36	11.61	0.713	0.055	0.765	0.08	0.025	2.597	0.110
Dry Mish	" " "	"	0.9946	9.64	11.96	0.568	0.041	0.609	0.31	0.025	2.459	0.128
Dry Black—Scuppernong	" " "	1886	0.9914	8.43	10.47	0.655	0.026	0.681	0.20	0.030	2.335	0.139
Dry Norton	" " "	1885	0.9965	9.14	11.35	0.724	0.041	0.765	0.25	0.025	2.785	0.224
Sweet Scuppernong	" " "	1884	1.0323	9.07	11.26	0.647	0.015	0.662	5.75	0.020	13.889	0.112
Sweet Mish	" " "	1885	1.0336	9.71	12.15	0.591	0.028	0.529	5.50	0.025	14.275	0.108
Sweet—Norton	" " "	"	1.0336	9.07	11.26	0.693	0.013	0.706	4.75	0.020	14.927	0.197
King Grape	N. W. Craft, Shove, N. C.	"	0.9932	12.77	15.77	0.770	....	0.770	1.75	Trace.	3.320	0.173
White Victory	" " "	"	1.0392	12.38	15.30	0.755	....	0.755	4.25	Trace.	16.646	0.106
Sweet—Martha	" " "	1884	1.0332	11.15	13.81	0.708	....	0.708	2.95	0.005	15.103	0.148
Sweet—Concord	" " "	"	1.0317	10.85	13.43	0.578	....	0.578	3.00	0.010	15.448	0.204
*Thomasberger	H. Mahler, Raleigh, N. C	....	1.0365	11.51	14.27	0.554	....	0.554	3.00	0.010	14.931	0.090
Claret—Ives' Seedling	" "	1884	0.9952	10.46	12.96	0.963	....	0.963	0.25	0.030	3.137	0.174
Sweet—Port Clinton	" "	1885	1.0314	12.92	15.96	0.886	....	0.886	2.00	Trace.	10.952	0.202
Dry Scuppernong	G. W. Lawrence, Fayetteville, N.C.	"	0.9931	13.80	17.02	0.655	0.014	0.669	0.50	0.005	3.698	0.116
Sweet Scuppernong	" " "	1884	1.0347	11.85	14.65	0.809	....	0.809	3.00	0.005	14.300	0.140

*The Thomasberger was purchased from a retail establishment, and its vintage is unknown.

FOREIGN WINES.

	Specific Gravity.	Alcohol by Weight.	Tartaric Acid.	Sugar.	Extract.	Ash.
French	0.9952	9.9	.506	.159	3.036	.216
German	0.9954	10.1	.599	.470	2.502	.194
Spanish	1.0593	11.6	.339	11.900	16.520	....
Italian	1.0019	13.86	.674	3.630	3.259	.214

TRAUMATIC SYMPATHETIC OPHTHALMIA.

By Joe Howell Way, M.D., Waynesville, N. C.

The term Sympathetic Ophthalmia is applied to that series of functional disturbances and destructive inflammations which sometimes develop in one eye from traumatisms of the opposite one. The liability of this affection to follow any traumatism of the eye, whether accidental or operative, its insidious character and intractable and uncertain course, and the necessity for the institution of prompt and decided remedial measures, render it one of the most important eye affections the practitioner is called upon to treat. As a cause of blindness it is a prolific one; nearly five per cent. of all cases being directly attributed to it, while of the preventable cases more than ten per cent. are assigned to it.

PATHOLOGY.

The pathology of traumatic sympathetic ophthalmia is yet involved in some degree of obscurity, and various theories as to the method of its development have been proposed. One of the earliest of these was that the morbific influence was transmitted from the diseased eye to the opposite one through the medium of the optic nerve and its interlacing fibres at the optic chiasm. The vascular system, the blood-vessels, the lymphatics, and even the blood itself, have each been regarded by different authorities as the channels of infection. Of recent years the ciliary nerves have been most generally regarded as the medium of transmission, but quite lately the older hypothesis of optic transmission has been revived. For anatomical reasons it does not seem probable that infection through the vascular system is likely to occur. The nervous supply of the ciliary body and iris is derived from the ciliary nerves (formed by branches of the third, fifth and sympathetic), and, as a rule, subject to very rare exceptions, the disease is set up by a perforating wound, with its consequent inflammation, in this region. Hence I am inclined to the opinion that improved modern methods of investigation will, when brought to bear on this affection, most likely establish the hypothesis of ciliary transmission.

Although its exact nature, as well as the precise method of its origin, is unknown; yet certain practical points in relation to its pathology are known which it will be well to consider. As before stated, this disease almost invariably has its origin in wounds of the ciliary region. This region, whose injury, or the presence near which of an inflammatory focus, or the lodgment within of a foreign body, is always followed by such serious disturbances, has earned for itself among oculists the title of the "danger zone." Penetrating wounds of this region are almost necessarily fatal to the eye receiving them, as well as greatly endangering the safety of its fellow by their extreme liability to excite sympathetic ophthalmia. This "zone" is sufficiently well outlined for all practical purposes by a circular segment of the eyeball three lines in width, encircling it immediately posterior to the cornea. The nervous and vascular supply of the ciliary region is abundant, and its importance in the nutrition of the surrounding structures great, consequently we can readily see how morbid processes instituted in this region should evince a tendency to invade other tissues. Lacerated wounds, wounds that heal slowly, the presence of a foreign body, the engagement of the iris or ciliary body between the lips of the scleral or corneal wound, as well as other conditions which render the occurrence of inflammatory action likely, as plastic or suppurative iridocyclitis, all tend to greatly increase the liability to sympathetic ophthalmia. Even a wound purely corneal, if complicated by a large anterior synechia which produces traction on the ciliary body, may cause it. To sum up our knowledge of the pathology and etiology of the disease, we arrive at the following conclusions: (1) The exciting eye has been the subject of a penetrating wound in its anterior part which has given rise to more or less plastic (very rarely purulent) inflammation of its ureal tract. (2) The optic and ciliary nerves of the exciting eye are sometimes the subject of inflammatory processes. (3) The irritation being propagated from the region most richly supplied by the ciliary nerves (the iris and ciliary body), they are probably the means of its transmission. (4) The first effects of the irritation are seen in the same structures of the sympathizing eye. (5) The presence of a foreign body within the eye is always to be viewed as a constant menace to the safety of its fellow, whether it be lodged in the ciliary region or not.

SYMPTOMATOLOGY.

The exciting eye always, when causing sympathetic irritation, shows evidences of inflammatory changes ; it may be simply as an iritis or a cyclitis, as an irido-cyclitis or irido-choroiditis, or even a panophthalmitis. Great variation as to the amount of inflammatory action may exist ; and it is well to be on our guard here, for an iritis which is painless and unattended with a noticeable degree of congestion may excite sympathetic trouble as readily as the most aggravated panophthalmitis. Generally speaking, ciliary congestion, photophobia, and ofttimes neuralgic pains are present in an eye, causing sympathetic irritation ; though the latter symptom may be absent, as was exemplified in a case recently seen by myself in which there was an entire absence of pain, though irido-cystitis and traumatic cataract had supervened after the puncture of the cornea by a thorn.

Sympathetic symptoms most often make their appearance within from four to ten weeks subsequent to the receipt of the injury ; rarely, if ever, earlier than two or three weeks, i. e., when time sufficient has elapsed for the development of inflammatory changes at the site of the injury. On the contrary, the disease may set in at any length of time, even many years, after the injury is inflicted, as in "a remarkable case related by Dr. Jacobi, in which a piece of iron imbedded in the eyeball occasioned no uneasiness for thirty years, when excessive pain occurred with sympathetic irritation in the other eye, necessitating the removal of the affected one."—*Gross.* The affection is seen at all ages, but is more likely to occur in children than in adults. As a rule symptoms of sympathetic irritation are present before sympathetic ophthalmia develops itself. These prodromata may exist in varying degree for a few days, or even weeks or months, before the disease is inaugurated, or they may subside without ophthalmia appearing ; finally, sympathetic ophthalmia may be, and often is, ushered in suddenly without any premonitory symptoms.

The eye laboring under sympathetic irritation is, in popular parlance, "weak" or "irritable" ; intolerance of light, lachrymation and deficient powers of accommodation, so that continued vision for near objects is painful or impossible, are present. The ciliary muscle seems liable to give way suddenly for a short time, the patient complaining that near objects now and then become misty and undistinguishable for a time. Temporary suspension of retinal function, indicated subjectively by darkening of sight, sometimes occurs, while other cases show a more lasting defect of vision without any ophthalmoscopic changes. Neuralgia of the ophthalmic division of the fifth is common. These functional disturbances may recur again and again with varying degrees of severity, sometimes lasting for days or weeks, and finally cease without inducing structural changes. The disease presents types varying from cases that are acute and violent and running a well-marked course, to those so insidious as to remain undiscovered until far advanced. When fully developed, sympathetic ophthalmia is essentially an irido-cyclitis or an irido-choroiditis; the visible alterations being those of iritis, with rapid formation of strong and extensive synechia. In addition to tenderness on pressure in the ciliary region, a dusky tint of ciliary congestion, with marked engorgement of the vessels, marked thickening and muddiness of the iris, and the anterior chamber becoming shallow, we also note among its chief early peculiarities the appearance of small opaque dots scattered over the whole area of the posterior elastic lamina of the cornea. The outlines of these dots are sharply defined, the large ones looking like minute globules of fat, and the small ones like fine particles of grey sand. The use of a small hand lens will aid in their detection. If an ophthalmoscopic examination is made, the vitreous is usually found clouded with floating opacities and neuro-retinitis is occasionally present. Small opaque dots and later on a generally diffused opacity of the lens is present in many cases. In all cases the intraocular tension is increased, the eye becoming glaucomatous. In acute cases of marked severity there is much pain, tenderness on pressure, photophobia, and the iris is changed in color to a dingy yellow or yellowish-brown tint. Ultimately, in severe cases, the eye may either shrink and become atrophied, or else a glaucomatous condition may be set up, with thinning and bulging of the sclerotic anteriorly, diffuse posterior synechia and secondary cataract.

PROGNOSIS.

When once set up, the disease is self-maintaining and usually runs a prolonged and relapsing course, extending over many months, or perhaps a year or two. In some cases of sympathetic irritation where structural lesions are not induced, the eye is rendered, for all practical purposes, useless, thus constituting what Dandess terms sympathetic neurosis. In a few cases of very mild type a good recovery eventually takes place, but the large majority of cases terminate in blindness; consequently our prognosis, even in the mildest cases, should always be guarded.

DIAGNOSIS.

The diagnosis of the affection is obvious, and space here need not be occupied in descanting on it.

TREATMENT.

The treatment of traumatic sympathetic ophthalmia after it has developed is, of course, important, and though often unsatisfactory, is always productive of good. But the measure above all others to be adopted is that of prophylaxis, and perhaps in no department of practical medicine does the old adage, "An ounce of preventive," etc., hold true with more force than here. Prophylaxis includes the proper care of the primarily injured eye from the time of the injury as well as later on. As regards the management of the injured eye, much will depend on the stage of the disorder, the extent and nature of the injury, and the amount of vision possessed by the wounded organ. Given a case where an injury has been recently sustained, and a fair degree of visual power remains, with no symptoms of irritation present. Here we would remove any foreign body that may be present, and if no immediate violent symptoms threaten, adopt an expectant plan of treatment, by placing the injured organ in the best possible way of healing, by the removal of all sources of irritation, the avoidance of light, the application of cold compresses, frequently repeated, general antiphlogistic treatment, and watching the opposite eye meanwhile for the slightest symptoms of sympathetic trouble; always remembering that when once it is set up we can do but little to modify the course or termination of sympathetic ophthalmia. But if the nature of the lesion be such that blindness, either as an immediate or a subsequent result from inflammation, have supervened in the injured organ, then we have but one course to pursue, and that is to promptly resort to enucleation of the injured organ. Especially is enucleation urgently demanded when the blind eye is already tender or irritable, or liable to become so; when it contains a foreign body; when it has been lost as the result of traumatism, or when blind from disease of the anterior segment of the globe; and finally, when, though not blind, the eye is so severely injured in the ciliary region as to preclude the possibility of retention of vision. Enucleation of a blind eye is also advisable as a prophylactic measure when there exists evidences of a past iritis with a shrunken globe, whether it has been injured or not. If the injured eye, though irritable and liable to cause sympathetic trouble, still retains more or less visual power, then we have presented a state of things demanding skill and judgment in their management. In such a case the date of the injury, the exact site of the wound, its probable depth, if healed, whether with puckering edges or not, the evidences of hæmorrhage and the condition of the lens, should all receive the most careful attention. Sympathetic irritation may supervene within a few hours after the receipt of an injury, but sympathetic ophthalmia is rarely inaugurated earlier than a few weeks afterward; hence we may, if we see the case early, adopt with propriety an expectant plan of treatment.

One point to be insisted on in the treatment of all ocular traumatisms, and one from the neglect of which I have seen the most disastrous results follow, is this: always, when trying to save the injured eye, insist upon the complete and prolonged rest of the patient in a darkened room as long as the slightest evidence of irritation be present.

So much for prophylaxis. If sympathetic ophthalmia have been called into activity, then the field of our therapeutic endeavor is narrowed, for we can do very little in retarding or ameliorating its course. While the advantages to be derived from such a course are slender, yet, in accordance with a well-known therapeutic law, it the exciting eye be blind, or so seriously damaged as to be practically useless, its enucleation should be resorted to at once. If the exciting eye retains some vision at the time of the occurrence of sympathetic ophthalmia, the course to be pursued is more uncertain, for it has occasionally happened under these circumstances that the primarily injured eye has in the end proved the more useful of the two. When only a moderate degree of inflammation is present, with or without traumatic or secondary cataract, and vision proportionate to the state of the lens, we must not resort to enucleation, but treat the eye most carefully, for ultimately it might be the better of the two. As for the treatment of the sympathizing eye, the measures to be adopted are perfect rest and quiet in a darkened room, with the eyes bandaged and the free use of atropine, as in other forms of iritis. Iridectomy at an early period, as well as sclerotomy, have been advised by some, but I cannot see the probability of either operation being of any material advantage, and think it much preferable to wait until the subsidence of inflammatory action, and, then, if necessary, perform an iridectomy and extract the lens. Mercury is advised in this, as in other forms of iritis, and is probably of some utility if pushed far enough. Appropriate constitutional treatment should be given. In comparatively mild cases of sympathetic neurosis division of the ciliary nerves has been successfully practiced by Meyer and others. As substitutes for enucleation Von Græffe has suggested the formation of a seton through the vitreous. Optico-ciliary neurectomy is advised by White, Wayes and others, while Schneigger prefers exenteration. While thorough antisepsis in operating will lessen the suppuration and hasten the separative processes after optico-ciliary neurectomy; and the recent successful use, by Mr. Keall, of hollow silver balls as substitutes for the evacuated vitreous in exenteration, has removed the chief objections to these procedures, yet I do not think they are so generally useful, or will they be at all likely to dethrone the older operation from its place in popular professional favor. In performing enucleation, if proper care be observed, the ends of the severed muscles, with the conjunctiva, may be formed into a movable and very serviceable pad at the bottom of the orbital cavity, which will give to the artificial eye a considerable degree of mobility. The mortality attending enucleation has been urged as an objection to it, and as an argument in favor of the newer procedures. So far as I am able to find there are from 1863 to 1887 only thirty deaths recorded from the operation, while optico-ciliary neurectomy has already four deaths attributed to it.

In conclusion, it should not be forgotten that traumatic sympathetic ophthalmia may develop itself after a period of several weeks subsequent to enucleation of the injured eye. Occurring under these circumstances rest and atropia, as indicated above, are to be used during the inflammatory period, and afterwards the question of operative procedure will be determined as under other circumstances.

BACTERIA IN ICE—The ice in New York has recently been examined by Dr. Prudden, who claims to have found twenty thousand living bacteria in a cubic centimeter of ice.—*Journal of Reconstructives*.

OPENING OF THE ANATOMY HALL AT THE UNIVERSITY OF VIRGINIA, WITH AN ADDRESS BY DR. PAUL B. BARRINGER, OF DAVIDSON COLLEGE, N. C.

[Special Correspondence.]

Richmond, Va., October 25, 1887.

Messrs. Editors :—The members of the medical class and many others have been looking forward to this day with much interest, for it was understood that to-day the new Anatomy Hall would be opened. It will be remembered by many of your readers that, during the last session, the old hall was rendered untenable by fire, and it became necessary to erect a new one, the plans of which were left to the Professor of Anatomy, Dr. Towles ; and they were made and carried out in a manner to insure the greatest comfort and convenience.

Only for the last few days have the class known that the regular lecture was to be suspended to give place to a formal opening, and that in no wise detracted from the interest they felt in the occasion.

Although we have as yet experienced no cold weather, this day (25th of October, 1887) dawned upon the University in a cold, drizzly rain, which, about 9 o'clock, changed into snow and sleet. Some of the students had the temerity to suggest that it was the fact of *Dr. Towles giving a holiday* which occasioned this phenomenon on the part of the elements.

Long before the appointed time the hall began to fill, and when the orator arrived there was a large audience to greet him with a hearty cheer. The "Meds" were out in force, and there were many others, including the greater part of the Faculty.

Dr. Towles, in introducing Dr. Barringer, said :

"This is an occasion of profound interest to me, and, I have no doubt, to each one of you. It has been deemed proper that some expression should be given to the feelings which arise on the opening of this new hall, which the generosity of the Faculty has given us. With this end in view, we have sought the services of a distinguished gentleman from a neighboring State, who has kindly consented to forsake his arduous and important duties at home that he might come and serve us here to-day. He has come to voice the memories and sentiments that are common to us all at this time.

"Gentlemen, I have the honor of introducing to you Dr. Paul B. Barringer, of North Carolina."

Dr. Barringer arose, and, when a cessation of the applause which greeted him permitted, delivered the following timely and instructive address :

A HISTORY OF THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF VIRGINIA—ITS SYSTEM OF EDUCATION AND ITS RESULTS—BY DR. P. B. BARRINGER.

Mr. Chairman, Professors and Students: :

It was ths custom with certain tribes of American Indians in the earlier days of this Continent, whenever they established a village, to erect a mound and place thereon a pile of stones, one for each lodge in the village, and to celebrate around this monument a feast, at which the medicine-man of the tribe recounted the history, recalled the traditions and enumerated the past glories of their race. In this way there could in after years be traced, by these monuments, the rise and fall, the history of their tribe. With this precedent before me, then, it seemed to me that at the dedication of this new monument to the growth and progress of our *Alma Mater*, that I, as the medicine-man of the occasion, could do nothing more appropriate than to recall the early history, recount the traditions and glories of this venerable school of medicine—to show you around this new monumental pile how, from a small beginning, in spite of the reverses of our land, the jealousy of rivals and the calumny of foes, it has developed and grown, till to-day, after more than sixty years of vigorous growth, it stands in the front rank of medical progress, with a history of success with which few can compare and which none can surpass. Let us, then, review the early history of this Institution of which it is a part, and see with what great care and by what great minds its youthful form was moulded and its early course directed, that it should have been successful in the fulfilment of so many hopes.

On the first day of August, 1818, there met at Rock Fish Gap, on the Blue Ridge, the Commissioners appointed by the Virginia Legislature to draft plans and specifications for an Institution of higher education for the Old Dominion, to be called the "University of Virginia."

As if in anticipation of the subsequent influence to be exerted by this Institution, not only upon the State, but upon the nation at large, we find the men composing this Commission to be men, not merely of local, but of national reputation and renown. Heading the list with the names of three Presidents of the United States, Mr. Jefferson, Mr. Madison and Mr. Monroe, in the order of their tenure of office. The latter had forsaken the duties and cares of the presidential chair, which he then filled, to be present at this meeting. But, in spite of his marked talents and his present official dignity, it was to Mr. Jefferson that the eyes of all were turned as the personal embodiment of the spirit of this cause. Already, in the watchful care over this trust, did he give a forecast of that continued parental solicitude that gave him in the end the well-deserved right to claim for himself the title of Father of the University of Virginia.

The first business of the Comissioners was to fix upon a suitable site for the University. The names of three places were proposed, Staunton, in the county of Augusta; Lexington, in the county of Roxbridge, and Central College, in this county. Each had its friends, and the result was in doubt till Mr. Jefferson, with other arguments, produced the names of a long list of octogenarians living in this neighborhood. That turned the scale in favor of its present site, and time has but added to this endorsement of the healthfulness and salubrity of this locality. As a further evidence of the care and thoroughness with which these plans had been previously canvassed, the University, as it stands to-day, in both architectural design and system of education, represents no material departure from the plan adopted at Rock Fish Gap. The system of instruction, however, interests us henceforth only as related to the Medical School. Suffice it to say that, after six years spent in the erection of buildings and the perfection of plans, the University was thrown open to students on March 7th, 1825, and went to work with but forty students. This number, however, soon grew, and by the end of the term was quadrupled. The School of Anatomy and Medicine was the modest title applied to the single school which has since developed into the Medical Department of the University of Virginia. This chair was then confided wholly and solely to the care of one professor, Dr. Robley Dunglison, of England.

Before proceeding further to the consideration of this illustrious name, in order to appreciate the benefits that even a school of this size offered, let us turn aside for a moment to view the condition of the profession in the United States at this time, more especially the profession in the Southern States. There were at this time schools of medicine at Boston, New Haven, Hanover, New York, Philadelphia and Baltimore, all, as you will observe, north of Mason and Dixon's Line. Not only was this true, but except for the seaboard cities, the difficulties of travel and the long delays in communication rendered these schools but little less than foreign to the States of the extreme South. In a catalogue of the Boston School of Medicine of this date (1824) I find among 110 students the names of but two Southern men, and they were both from Charleston. The above condition of isolation, coupled with sectional animosities, already beginning to exert themselves, caused the above-named schools to be but poorly patronized by students from the South, though Philadelphia and Baltimore were more patronized than Boston. London was the medical *Mecca* of that day, and the more ambitious young men of the South went there, and upon their return found little difficulty in building up local schools of considerable size. Such were the schools of Dr. ———, in this State, and that of Dr. Harris, in North Carolina.

Under these conditions, you can readily see what an influence a medical school, under the auspices of a University of broad and liberal culture, would exert.

The foregoing facts also, no doubt, in connection with Mr. Jefferson's knowledge and appreciation of the outside world, influenced him in selecting as the professor of this school an Englishman, in the person of Dr. Dunglison.

Dr. Robley Dunglison was a young man, not more than twenty-six years of age, but in the land of his nativity he had already gained a reputation, and as a writer in the *London Medical Intelligencer*, of which he was editor, he was already beginning to give promise of those high literary attainments which ultimately made him the first medical author of his day. Even at this time he was no ordinary man—being a man of broad views, wide general education, and, above all, wonderful energy and versatility. One would have thought that to have fulfilled all the duties pertaining to his chair, in addition to his official duties as Chairman of the Faculty, would have engaged the entire time of any one man. But while here engaged in his multifarious duties, we see him, in conjunction with Prof. George Long, of the University, editing *A Study oj Roman and Greek Geography.*

This evidence of wide classical training was subsequently signally shown in the production of his *Medical Dictionary,* which is, even at this day, the best work of its kind in the language.

Such culture could not fail to attract, and in 1827, within two years after the opening of the University, in compliance with a generally expressed demand, what had previously been but a single school, was enlarged into a department. And thus we find that in October, 1827, just sixty years ago, that the life, history and sphere of usefulness of this illustrious School of Medicine began, with Dr. Dunglison as chief. And here, gentlemen, let me say that to a school, whose pride has ever been that its diploma represents a fixed standard of general scholarship, in addition to medical knowledge, it should be a matter of just pride and infinite satisfaction that its bark was first launched and guided on its course to success by the man whose name represents, above all others, that which is broad and classical is American medicine.

From that day till the present, if we except one dark year of the war, it has, term after term, and year after year, sent forth its graduates as "missionaries in the cause of health ; soldiers, and, if need be, martyrs, in the unending battle with disease and its cause."

We have not time to follow out here the full record of the changes which the hand of time has wrought in the professional corps of this old medical school, or to pay aught but a general tribute to the memory of her devoted dead. So, having given in detail the cause and circumstances of her beginning and the prophetic significance of the greatness of her founder, I will now pass on to consider certain peculiarities of her educational system left as legacies by her founders. These have, from their marked variance from those of similar institutions in the land, caused much criticism and much comment. There are not a few, however, who consider them to have been the main cause of her wonderful success. I allude to her location under the wings of her fostering mother, to her peculiarly long course of study for a medical school, and to her simple, but incomparable, standard of requirements for graduation.

At various times in the history of this department its removal to some larger city has been urged as necessary to keep pace with other institutions of similar character in the land. Most wisely, in my opinion, this has not been done.

We have here what, perhaps, cannot be found elsewhere in the United States—a University of the Arts and Sciences, combining schools of general Literature and Science with those of Law and Medicine. Well supplied with halls, museums and libraries, and with the general paraphernalia of college equipment. Under similar environment, similar management, and, above all, imbued with a similar spirit, an *esprit du corps* that wealth cannot purchase or brains alone create. A distinctive corpórate spirit that is peculiar to educational centers of this kind, where all the branches of useful knowledge and elements of a finished education are brought together, that is not to be found in the isolated, individual schools. The various branches, when thus apposed, all tend to emulate, illustrate and adorn each other, and (when) if separated, but a small part of the vital spirit goes with the dismembered part. For learning is not an inanimate thing ; it is a living body ; its different members belong together as parts of a coördinated whole, and cannot be drawn and quartered with the expectation that they will live. We should be willing to forego many of the advantages to be found elsewhere, and to make all needful sacrifices to keep this department here.

Of late it is often deplored that medicine is ceasing to be one of the broad professions ; that its range of thought is being daily more narrowed to the mere limits to technical study. If this be true, and I fear that it is, its reason is assuredly to be found in the narrowing influence of isolated schools.

But does this department suffer by its absence from the larger cities? Does not the widened horizon of general culture more than compensate for the comparative insignificance of the clinical advantages here to be found, as compared with those of a great city? This opens up a wide field of discussion ; one far too wide for a paper of this sort ; but a few points may be broadly put. No college or department of medicine, with the short time of service required for a degree in America, whatever may be its clinical advantages, can turn out a finished practitioner. I doubt not that even if the present term of service were doubled, the result would be the same. It is only when you come face to face with disease, alone and unaided, that the intellectual faculties are quickened to the extent that their tension puts its lasting impress upon the mind and those moral qualities are engendered which go to make up the practitioner. In the dread contest with a foe whose insidious approach is never heralded, whose panoply of war is as variable as the devices of the devil, and whose mode of action is ever influenced by conditions and surroundings which no man can gauge, to meet a foe of this kind, which is better, a short training in the use of those arms usually attributed to him, or a system of general medical gymnastics that sends forth its athletes prepared for all emergencies, confident and valiant. It is here, gentlemen, that our old *Alma Mater* stands supreme. Making the known, firmly established fundamental principles of medical science a specialty, her students are prepared to reap the full benefit of clinical advantages. Clinical demonstration with such preparation can be understood, and whether received by the student here or at the bedside of his first patient, it will make a lasting impression. I do not disclaim the benefits of clinical instruction and heartily endorse the action of your professors in establishing the new dispensary. An abundance of clinical material is of inestimable advantage, if properly used. There can be no denial of this. Such institutions as the Past-Graduate School of New York and other cities, where clinical instruction alone is used, have been of value beyond measure to the medical profession of the land. But with the results before us of some of the other colleges whose clinical instruction is abounding, may well cause us to ask, Is this all that is necessary? By no means. Medicine is a science, and should be taught as a science. The art is but her handmaiden. The latter should always give precedence to the former. The great mistake of most schools is that the art is nurtured to the detriment of the science. To such an extent has this been carried that in one of the best known schools of the land they give to first-course students and all seventeen hours a week for Clinics and but two for Physiology. This is sending them to seed most too soon.

But this is not the fault of America alone. It is the fault of the present medical world, if we except, perhaps, Germany. That this system of object-teaching, as we might call it, applied to medicine, can make successful practitioners, we see daily exemplified. But while to be a successful practitioner is an end devoutly to be desired, is it the chief end, as we say in the catechism, of a medical life? Are we to live and die in the utilization of a profession leaving nothing added to its advancement? Not something alone of technical skill, for heredity alone would in time accomplish this, but something in the line of which the medical world now looks most eagerly, something toward the line of the solution of the phenomena of every-day life, which leads to the solution of the cause of every-day death. Barring accidents, such discoveries must come from among those best armed with the knowledge now possessed in this line. If the history of German medicine shows anything, it shows this to be true. For deny it as we will, for the last decade the world has been but amplifying upon data obtained from Germany from men educated in just such schools as this. For in its method of teaching and in its many differences from the ordinary schools, it approaches more nearly to the German type. Now, what have been and what now are the peculiarities of this school, as distinguished from most American schools. First, we will mention the nine-month's session. The early fathers of this Institution, in their simplicity, could see no reason why it took less work and less study to become a physician than to become a lawyer or a preacher, and decreed that we should have six days a week for nine months and no Christmas. This is the longest term of continued medical study in the United States, and fully double the average term.

A second peculiar feature, as compared with other medical schools of this country, is that the professors devote their whole time to their duties as teachers and such professional duties as are required at the dispensary and hospital. This is not usual, even in the medical departments of universities. But here the bond of relationship of this school to its mother, being as great in reality as it is in the catalogue. No distinction is made in the duties of the professors.

But the feature of this school which departs most widely from the average American type is the feature relating to the requirements for graduation. Having a fixed and not a comparative standard of scholarship, the requirements for graduation are robbed of many of their ordinary formalities. There is no prescribed time of attendance, that, while tantalizing the ambitious, serves to cover the incapacity of the dullard and the shortcomings of the slothful; no theses, by which to measure, instead of literary qualifications, powers of hypothecation. These are wisely dispensed with.

But in the examination hall, within a given time, the student must here give evidence in writing of a certain standard of scientific and literary scholarship. And what is this standard? It is to attain a minimum of 80 per cent. upon the valuation of a series of written examinations covering the whole field of medical study; and, moreover, to show by composition and general expression educational acquirements commensurate with the dignity of this venerable Institution.

A diploma of this kind represents something tangible. It is a certificate of good faith on the part of the donors and a representative of good work on the part of the recipient. Of the bearers of such diplomas it would be but just to expect something more than of the average medical graduate. I think we will find proof that our expectations have not been in vain. If the diamond is valuable not alone from its intrinsic beauty and worth, but from its rarity, in what esteem must be held the 616 diplomas only that have been given up to 1880 from among over 3,000 matriculates in this school since 1828! And remembering that there stood no barrier to the graduation of each and every one of these except the high standard of knowledge imposed, we appreciate the full value of its discriminating power. All honor to the early censors of this school who established and have maintained this high standard, unlowered even in the darkest days of the Department's need.

Is there another school in the United States that can approach such a record? We throw down the gauntlet and challenge comparison. Of these 616 graduates no less than 43 are now, or have been, professors and teachers of medicine in the various medical schools of the land. Through what widening channels, then, must now the influence of this whole Medical Department be felt! Of all the places of honor and distinction open for competitive examination, without favor or bias, to the young medical men of the United States, there are none that require a higher standard of scientific scholarship than the medical corps of the United States Army and Navy. From first to last no less than 60 of the graduates of this school have been in this service, and, as if to show beyond cavil that though old in years, she is still youthful in vigor, between the years of 1870 and 1880 no less than 38 out 180 of the graduates of this school obtained entrance into this corps, with very few failures on the part of an applicant. From the official register of the Army and Navy for the year 1885 I find no less than 16 out of 57 Past-Assistant Surgeons in the Navy were University of Virginia men, while in the Army the graduates of this school were 14. When you know that there are usually ten men for each vacancy, and that they represent the flower of the young profession of the land, you will appreciate what these figures mean. In the Confederate Army and Navy there were more than 250 of the graduates of this Institution. Of the two Surgeons-in-Chief of the Confederate States Army the first bore the diploma of this school and the other had been a student within its walls. Throughout the width and breadth of this broad land, from Maine to Texas, you will find them standing ever in the line of duty, leaders in the vanguard of progress.

With such traditions and with such a record before us, may we not, at the dedication of this new Anatomical Hall, by the renewal of our tribal allegiance and by our united efforts, so endeavor that if, with the march of time, the traditional New Zealander should ever ponder over the ruins of America, he shall never see aught here to belie the glorious history and never-staying progress of this noble Institution.

Col. Venable, the Chairman of the Faculty, said he deemed it but proper that a son of North Carolina should be invited to deliver the address on this occasion. He alluded in glowing terms to the firmness and devotion to duty that characterized the men of North Carolina in many hot conflicts in which the sons of both these States stood shoulder to shoulder; and eulogized the heroism of the surgeons she sent into the field in their unflinching adherence to duty, whether on battle-field or in hospital. "I move, then," he said, "a rising vote of thanks to Dr. Barringer, and let it be given in a hearty cheer." And he could not have expected one more rousing than that which burst forth from a hundred or more pairs of lusty lungs.

The "Meds" are seen everywhere this year, the class numbering upwards of eighty, and of these there are sixteen who belong to

NORTH CAROLINA.

ACETANILID IN TYPHOID FEVER.—Dr. J. Solis-Cohen, in a recently published article, expresses the opinion that acetanilid is much more apt to produce collapse in typhoid fever than antipyrin. In doses of seven and a half grains it has reduced evening temperature from 105° to 96.5°, with a return wave to 102° and more, by early morning. Three grains are in some instances quite as effective as larger doses, while much less dangerous. Physicians should see their patients within an hour or two after administration of the first dose in order to determine by results the propriety for its repetition.—*Medical Standard.*

SELECTED PAPERS.

UTILITY OF SCIENTIFIC WORK IN PRACTICE.

The following extract is from an address by Sir James Paget, at the opening session of Owens College. This great writer and teacher never fails to inculcate TRUTH as the prerequisite of all study and observation. Long may he live to lead the profession of the world :

"Medicine and surgery are eminently a science of observation ; deductions from facts are always unsafe ; I believe that they have done far more harm than good ; and, for the most part, when sufficient facts have been collected and arranged, the general conclusions that may justly be drawn from them are nearly manifest. The main thing for progress and for self-improvement is accurate observation. Some seem to think it easy to observe accurately—they cannot doubt, as they say, the evidence of their senses. There are few greater fallacies. In scientific studies the evidence of the senses needs as much cross-examination as any evidence given in a criminal trial. Self cross-examination it may be, but it must be steady and severe. For by accurate observation we must mean not the mere exercise of the senses, not the mere seeing, or hearing, or touching of a thing, with some levity of thinking about it—we must not mean even the keenest use of the eye cultivated in microscopic work, or of the ear hearing sounds that to the uneducated sense would be inaudible, or the use of the finger with the most refined detective touch. All these higher powers of the senses you must acquire by careful study and practice, and you must learn to exercise them with all the attention with which a strong will can direct and watch them ; but even all this, difficult as it is, is only a part of scientific observation. This must include, besides, an habitual constant watchfulness, the taking notice of all the conditions in which objects or events are found ; their occurrence, their sequences, their seeming mutual relations, all their variations. To do this, and to do it again and again, and with constant care, whether it be in things occurring naturally or in experiments—to do this accurately and always is really very difficult. A few seem to have the power naturally; there are some born naturalists, some born physicists; you have had some here; but in nearly all men, and you may safely believe, in yourselves, the power to observe accurately needs careful self-training, self-suspicion and self-discipline.

"If accurate observation were easy, how could we explain the oversights and the errors of which the evidences abound in the whole history of medicine, and which, I think, everyone could find in a retrospect of his own work? Look at the history of discoveries. As a general rule, every discovery of things that can be observed tells of previous oversight or want of observation. Some discoveries, indeed, have followed quickly on the invention of improved means of observation, or on the advancement of knowledge clearing away some previous obscurities. These, it may fairly be said, could not have been made much sooner; but of far more it may certainly be said that the discoveries in each generation are evidences of the oversights, the defective or erroneous observations of men of previous times—even of the best of them. Take some leading instances. All the facts which enabled Jenner to discover vaccination were within the range of his predecessors; they saw and heard of them, but they did not observe them; they all overlooked them, except the one farmer who vaccinated his children, but could not persuade others to follow his example. All the sounds on which Laennic established his system of auscultation were within the hearing of previous generations and of his elder contemporaries; many had heard them, but they did not listen as he did, and they did not observe the conditions in which the different sounds occurred—how each coincided with some diseased process or change of structure in the heart or lungs. All the facts by which Hunter was guided to his operation for aneurysm might have been obvious to other surgeons of his own and lately previous times. They did see them; they did not carefully observe them. I need not multiply examples. Look at any discovery of this or last year, and think whether it might not have been made in the previous year or some years ago; and when you find that it might have been and was not, though men of excellent ability were within reach of it, then you may feel that accurate and complete observation is a really difficult thing, and that for the fulfilment of your duty, whether to science or to your patients, you must cultivate the power of searching and observing with all your might.

"I have been more than usually impressed with these thoughts after lately looking through many of my old case-books, and finding in them evidences of more oversights and errors of observation than I had imagined myself guilty of; and though I might console myself by the examples of the distinguished men who did not discover vaccination or the use of auscultation, and did not improve the treatment of aneurysm, yet it made me think that, as an act of penitence I ought to try to make amends by warning some who are beginning such work as I have so failed in. For instance, among my records are those of nearly all the *post mortem* examinations which I made nearly fifty years ago, when I was Demonstrator of Morbid Anatomy at St. Bartholomew's Hospital. They are full and tedious; but the evidences of oversight and of errors in observation are many. I find, for example, complete and full records of the examinations of typhoid ulcers of the intestines; and they are regarded as illustrations of the typhus fever then supposed to be prevailing. Many others were thinking the same, many had thought so years and years before; but about the same time Sir William Jenner not only saw such ulcers, but accurately observed them, and he observed all the conditions with which they alone coincided, and he proved that they were characteristic of a fever essentially different from typhus. In the same records I find long descriptions of the morbid changes in different forms of venous and capillary embolism, but I wholly overlooked and missed their meaning till it was discovered by Virchow and my own pupil Kirkes, and by others more observant than myself. I saw all these things; they accurately observed them; they studied the associated facts; and embolism, which had been destroying healths and lives for ages in secret, was at last discovered.

"Do not let me seem to suggest that I deserve credit for having seen these and other like things as if for discoveries for which others have been honored. Far from this, these are evidences of that very oversight which I want to persuade you to avoid. It is a shame rather than honor to have seen a thing and not observed it; to have been within reach of a scientific truth and not have grasped it.

"But, it may be said, these are examples of discoveries made in large fields of observation, and needing long and careful research among many cases ; these are not within reach in ordinary practice. Look, then, at some simpler instances. Not a year passes but some one describes a disease of which we had no previous record—a spondylitis deformans, or some new form of myxœdema, an osteitis deformans, or some new manifestation of tubercle or cancer ; it matters not what—a novelty. And the first case is thought unique, strange, and by some, not much worth thinking of ; but soon similar cafes are found here and there, and the new disease seems hardly rare. I will not say that no new diseases ever appear. I have long maintained that they do, but they do not come among us on a sudden, and we may be certain, whenever a case of a new disease is observed, it is not the first that has occurred or the only one existing ; similar cases have been overlooked, they have been within sight and have not been observed. And without doubt there are similar examples of oversight among us still. For example, a distinguished pathologist in Paris has lately described a disease which he names '*acromégalie*,' with singular enlargement of the bones of the face and hands and feet. I cannot suppose that this disease is limited to France ; it must, I think, be among us as well ; but, so far as I know, no Englishman has yet observed it. Well, I blame no one unless it be myself ; I want only to show by facts like these that it is very difficult to observe accurately, and that if you are to do your whole duty, either to your patients or to science, you must now and always study and practice the right methods of scientific observation.

"I wish that the arguments for this were only in the oversights, the mere defects of observation. Unhappily, the errors illustrated in all the history of medicine, and in much that is still in progress, are very numerous too. Facts, when not quite overlooked, are too often seen and recorded erroneously. I would not speak of such errors without a confession of having contributed to them, or without the fair motive of wishing to urge the best means for avoiding the like of them. For remember that many of them were made, or are being made, by men as honest as we are, or ought to be, and fairly in the pursuit of knowledge.

"It would need some volumes to relate all the sources of error in scientific observation. I will mention only one, for I think it is the most frequent, and I should like you to be always watching against it. It is the habit that we have of inserting some of our own, something of our beliefs, of our expectations, nay, even of our wishes, into that which we think or say that we observe. We expect facts or events to agree with what we believe that we know, and we make light of the differences and exaggerate the likenesses; we take no thought of what we call accidental exceptions; we think them unmeaning—as if anything in Nature could be without meaning—and we do not half observe them. In philosophy we can separate things from thoughts, the object from the subject; but in ourselves and in ordinary life they are mingled in every act of consciousness and reflection; and sometimes it is only by careful self-analysis and by habit studiously gained that we can separate them and observe simply and accurately."—*British Medical Journal.*

THE USE OF VERATRUM VIRIDE IN KINGS COUNTY, NEW YORK; WITH ESPECIAL REFERENCE TO ITS CONTROL OF PUERPERAL CONVULSIONS.

By J. D. Rushmore, M.D., Brooklyn, N. Y. Read before the Kings County Medical Association, June 7, 1887.

[From advanced sheets of Gaillard's Medical Journal.]

[We present to our readers as much of this valuable symposium on Veratrum Viride as we can make room for, and commend it to them as being of unusual quality.]

Both the favorable and the unfavorable estimates put upon veratrum viride are fairly shown by the following extracts from Fordyce Barker on "Puerperal Diseases," and from "The National Dispensatory." Barker says: "We have, however, two agents in our materia medica which act specifically as vascular sedatives. These are aconite and veratrum viride. Simply as a vascular sedative, I greatly prefer the veratrum viride, and I think this is the fact with all who have any considerable experience in the use of both, but I must tell you that this class probably constitute but a small minority in the profession. I meet with many who have a great fear of the veratrum viride, because it sometimes produces the appearance of dangerous collapse. But this is a very temporary condition, which, so far as I have heard, has never terminated disastrously. The appearance of one who has taken too much veratrum viride is almost precisely like that produced by tobacco in those unaccustomed to its use; I have often seen this, but now, when I do, it causes no alarm, as I am sure that the effects will soon pass off. There is no objection to assisting reaction in such cases by carbonate of ammonia or small quantities of some alcoholic stimulant. In a small percentage of cases it is quite liable to cause nausea, but this is readily counteracted by giving it in combination with the tincture of ginger. As to its positive effects, I will say that you can, by it, absolutely and certainly control the frequency of the pulse of inflammation and irritation. Stillé says in "The National Dispensatory," in speaking of the medicinal uses of veratrum viride: "The greater number of reports which have been published concerning the medicinal uses of green veratrum are, unfortunately, not only deficient in the details on which a judgment could securely rest, but exhibit great ignorance of the natural history of disease and of the relations of medicines to its cure. The only conclusions to be drawn from a critical study of the mass of conflicting evidence respecting its use in the diseases referred to ("sthenic and asthenic diseases, inflammation and fevers") is that the patients would have been better off, not only without its use, but also without that of the medicines associated with it. Green veratrum reduces the patient to a state of such wretchedness that he is unable to take food, or to digest it if he ate it, or even to find energy enough to cling to that last refuge of sufferers—hope."

In regard to the danger incident to the administration of veratrum viride, it may be stated that Stillé, in his "Therapeutics and Materia Medica," reports one death of a child eighteen months old, suffering from catarrh, after taking a single dose of thirty-five drops of the tincture, and another case when death took place after sixteen drops of Norwood's tincture in three-hour intervals in a patient "suffering from hepatic distress accompanied by occasional vomiting of bilious matter."

The following cases of poisoning by veratrum viride, with two deaths, are reported in this connection from records in the Surgeon General's office at Washington.

Female with bronchitis—general condition good, took undiluted, on empty stomach, Norwood's tinct. veratrum viride. Severe characteristic poison symptom developed in twenty minutes. Nausea, but no vomiting. Free emesis by mustard. Dorsal-decubitus. Brandy, friction, gr. 1–4 morph. sulph. Slight improvement in pulse, but patient suddenly exclaimed, "I cannot breathe," and died. R. W. Walmsley in *N. O. Med. and Surg. Journal*, 1884–5.

H. C——— took a drachm (probably). Speechless and powerless for several hours. No treatment mentioned. Recovery. J. B. Buckingham in *Amer. Jour. of Med. Sciences*, October, 1865.

Lawyer took same dose as above. In half hour speechless; incessant vomiting and retching. Pulse hardly perceptible at wrist. Administered tinct. opii, vomiting ceased, pulse increased and recovery prompt. J. B. Buckingham. Ibid.

Negro girl, æt 16, took Norwood's tinct. One hour after, nausea, no vomiting, pulse 40, very feeble. Emetic acted. Mustard externally, whiskey internally. No benefit. Pulse down to 30. Electricity employed with some immediate effect on pulse, but could not withdraw electricity until end of four hours. E. Mason in *Trans. Med. Assn. Alabama*, 1887.

Male, æt 30, took several doses (quantity not given) between 3 and 10 p. m. At 11 : 30 free emesis. Pulse about imperceptible—16 per minute; 1–2 gr. sulph. morph.; whiskey with gr. x. quin.; sulph. by rectum. Rapid recovery. J. S. Bailey in *N. O. Med. and Surg. Jour.*, 1877.

In cases of R. M. Kirk, one fatal in *Med. and Surg. Reg., Philadelphia*, 1879, and one case reported by L. N. Hornitz, in *Philad. Med. Jour.*, 1883–4, are noted in above list of poison cases; but the details could not be found in the library of Academy of Medicine of New York, by Dr. J. K. Culkin, House Surgeon of the Brooklyn Eye and Ear Hospital, who kindly furnished for my use the above report of cases of poisoning by veratrum viride.

In order to learn to what extent veratrum viride was used by the profession of Brooklyn, personal inquiry at several of the old and large drug stores furnished such answers to the question, How much do you dispense of veratrum viride? the reply was, "Seldom." "Very little." "So seldom that I cannot remember the last time," etc., etc.

The following cases of puerperal eclampsia, treated by veratrum viride, followed by a brief statement in regard to its use in general diseases, is submitted for your consideration and discussion. These cases, both puerperal and others, are taken from about 140 replies to the 636 circulars that were sent to the regular physicians in the country :

Dr. W. G. Russell—two cases ; both post-partum ; recovery ; drug administered hypodermically, in from five to fifteen minims every fifteen or twenty minutes ; pulse-beats diminished and convulsions controlled ; no measures necessary to control nausea.

Dr. W. F. Swaim—one case died ; primipara ; seventh month of pregnancy, lower limbs and hands very œdematous ; two convulsions before and twelve or fifteen after delivery ; drachm doses hourly for three hours by the mouth ; pulse reduced in frequency ; convulsions continued ; stomach unable to retain anything after third dose ; no measures used to prevent nausea or vomiting.

Dr. T. M. Loyd—one case ; ante-partum ; one dose of ten or twelve minims Squibb's fluid extract hypodermically ; reduced pulse to the forties in half an hour ; chloroform used until delivered ; two severe convulsions with tendency to return each time ; chloroform was withdrawn, when veratrum was administered.

Dr. G. W. Cushing—two cases ; post-partum ; one recovery, one death ; dose five to thirty drops ; fluid extract (Squibb's), from fifteen minutes' to four-hour intervals by mouth and hypodermically ; pulse promptly reduced and convulsions relieved ; nothing necessary to relieve nausea ; has seen no serious symptoms result from its use ; it is quickly eliminated.

Dr. H. Enton—two cases ; both ante-partum ; recovery in each ; dose twenty, fifteen an ten minims every fifteen minutes to two hours, by mouth, rectum or hypodermically ; pulse became soft and slow ; convulsions less frequent and severe ; patients vomited to some extent ; one primapara, one multipara ; urine loaded with albumen in each.

Dr. W. H. Randolph—one ante-partum case ; recovery ; remedy given hypodermically ; pulse below fifty ; convulsions ceased ; no treatment necessary for nausea.

Dr. J. E. Shroeder—two ante-partum ; both recovered ; dose fifteen, ten, and fifteen minims tincture half-hourly by mouth ; pulse decreased ; convulsions at wider intervals ; no measures necessary to relieve nausea ; chloroform used in one case, chloral and potassium bromide in the other. Delivery in an hour after last dose of veratrum, and convulsions ceased.

Dr. J. J. Terhune—four cases; two ante-partum, two post-partum; three recoveries; one death; twenty to forty minim doses every twenty minutes and upward—hypodermically; tincture always reduced pulse, and no convulsions occurred; pulse is below 90; no anti-emetics.

Dr. J. Corbin—one ante-partum; each recovered; five to ten minims fluid extract every half to one hour hypodermically; pulse reduced and convulsions stopped; no anti-emetics.

Dr. J. Fred Moore—one ante-partum case; recovery; forty drops by the mouth every half hour until vomiting; pulse not recorded; subsiding of convulsions; no anti-emetic used; other agents had been employed before using veratrum; would use it again in inception of trouble to relieve cerebral engorgement.

Dr. Benjamin Edson—two ante-partum cases; one recovered; five minim doses by mouth; pulse lowered and convulsions ceased; one case died; fifteen minims hypodermically; little effect on pulse or convulsions; chloroform also used in this case; intervals of administration irregular in each case.

Dr. George A. Ostrander—one ante-partum case; died; drug given frequently by the mouth; pulse slowed; convulsions continued; no vomiting; case seen many years ago; has always been afraid of veratrum viride; prefers to use other remedies.

Dr. E. A. Lewis—two post-partum cases; both recovered; dose twenty to thirty minims fluid extract hypodermically at irregular intervals; pulse came down; convulsions ceased; no anti-emetics; one case apparently beyond hope, but recovered.

Dr. Wm. Browning—one ante-partum case; seen with another physician; drug used a day or two after phlebotomy; recovery.

Dr. J. E. Richardson—four cases; three ante-partum, one post-partum; one post-partum, two ante-partum cases recovered; the other died; dose four or five minims of tincture every two or three hours; in two cases hypodermically, in two by mouth and rectum; pulse reduced in force and frequency, and convulsions less severe and frequent; chloroform used; no trouble from nausea.

Dr. C. Fulda—two post-partum cases; both died; one to three drops of Norwood's tincture every half hour by mouth; pulse lowered; convulsions continued; no anti-emetics.

Dr. Henry N. Read—one ante-partum case; death; five minims (U. S. P.) half-hourly by mouth; pulse lowered slightly; no effect on convulsions; no anti-emetics necessary; case fatal twenty-four hours after attack began; chloroform, morphia, bleeding had no effect.

Dr. T. P. Corbally—two ante-partum cases; one recovery, one death; dose ten minims, five minims, after ten hours hypodermically; case of recovery albumen coma; case of death had extensive pulmonary œdema, and probably cerebral effusion.

Dr. H. E. Durner—one post-partum case; death; drug given by mouth; diminished rapidity of pulse, and convulsions slight; no anti-emetics.

Dr. Wm. Madden—two cases; one ante-partum, one post-partum; former recovered, latter died; dose five minims Norwood's tincture every fifteen minutes hypodermically; in ante-partum case pulse fell to forty; convulsions ceased after eighty minims ad been used; no anti emetics; the post-partum case complicated with epilepsy; chloroform used in each case.

Dr. J. D. Sullivan—two ante-partum cases; one recovery, one death; drug given hypodermically in five to ten minim doses, p. r. n., in half to two-hour intervals; pulse was reduced in frequency, and controlled convulsions for a time; suspension of drug relieved nausea. In first case, after doing well for ten days, convulsions recurred and death took place in a few hours. In second case pulse fell to sixty and induced vomiting and copious perspiration.

Dr. George R. Westbrook—two cases; one ante-partum, one post-partum; the former recovered, the latter died; dose ten minims tincture hourly hypodermically; pulse reduced to sixty in case that died; convulsions not controlled. In second case pulse sixty-four; convulsions ceased after second dose; no vomiting in either case. In the case that recovered only two ounces of urine were excreted in twelve hours; about sixty per cent. albumen, which disappeared after five days; loss of vision for ten days; death by asphyxia in a convulsion in post-partum case.

Dr. George H. Parshall—two ante-partum cases; both recovered from convulsions, but died later; the first of pleurisy, after two weeks; the second pulmonary congestion, after three days; dose twenty to thirty drops Norwood's tincture; half-hour intervals by mouth; pulse reduced; convulsions ceased; no anti-emetics. In second case two doses given; pulse fell from 140 to 72; free perspiration; pulmonary œdema relieved; consciousness restored; weakness developed; pulse grew rapid; respiration rapid; lungs congested; death.

Dr. John H. Trent—two cases; post-partum; recovery; half teaspoonful of Squibb's fluid extract every two hours until relieved, given by mouth; convulsions soon ceased; pulse not noted; no anti-emetics.

Dr. E. W. Owen—several cases; recovery; dose two to four drops every hour or two by mouth; pulse slowed and temperature reduced; combined with aromatic spirits of ammonia to prevent nausea.

Dr. John Van Ness—during thirty-five years probably fifty cases; eight to ten per cent. of recoveries; dose two to four drops by mouth, often enough to keep pulse down to sixty; pulse and convulsions very satisfactorily effected; champagne and kumiss to relieve nausea.

Dr. F. W. Rockwell—has used it (veratrum viride) in a few cases, in the form of tincture and as recommended by Dr. Fearn, with excellent results; should use it again freely if other cases presented.

Dr. A. A. Shepherd—used it in half-drachm doses by mouth, or drachm doses by rectum until convulsions ceased; experience so satisfactory that he was almost lead to look upon veratrum viride as a sure antidote to the uræmic poison inducing puerperal convulsions; never felt that the tonic effect of the drug ever increased tendency to death

Dr. Frank Baldwin—saw it used in post-partum case (case of Dr. Corbin) with excellent results.

Dr. Benjamin Ayres—has not used it, venesection seldom disappointing him in suitable case.

Dr. J. F. Golding prefers to use chloral hydrate in puerperal eclampsia.

Dr. J. H. Barber—in post-partum case; recovery; ʒ ss. dose by mouth every hour until half an ounce had been taken; convulsions ceased; pulse reduced; no anti-emetics.

Dr. Charles Jewett—twenty cases; sixteen ante-partum; two post-partum; one ante-partum and post-partum; one not noted. Three deaths; in ante-partum cases; in convulsive stage the other deaths were due in post-partum cases to pulmonary œdema; one case; several days after last convulsions ceased; none died of eclampsia in whom verátrum was used early (before eight or ten convulsions). Dose, ten to twenty minims, p. r. n., to hold pulse below sixty, given hypodermically; prompt reduction of pulse nearly to or below sixty, ; no convulsions while pulse was below sixty; no attempt to prevent or arrest nausea or vomiting. In one or two cases in which twenty or thirty convulsions had occurred and the patient was moribund, veratrum failed to control the pulse.

Dr. W. H. Thayer—one ante-partum case; recovery; dose nearly one drachm; after a convulsion twenty-five drops of Squibb's fluid extract, which was almost immediately vomited; given by mouth; pulse reduced f om 120 to 60 in two and a half hours, and rose to 84 in four hours; convulsions at intervals of half an hour or more for five hours; two within an hour after administration of drug; none after that.

Dr. H. C. Rogers—three ante-partum cases; recovery in each; dose eight to ten minims, hypodermically, from one-half to ten hours; pulse reduced in strength and frequency; convulsions arrested; calomel in small doses to relieve nausea.

Dr. F. W. Wunderlich—one post-partum case; death; dose six drops every two hours until three doses were given; then the medicine, when intermitted; feeble and irregular pulse necessitated the discontinuance; convulsions not affected.

Dr. George H. Kuhn—five ante-partum cases; three recoveries; two deaths; in three convulsions were arrested; dose first every fifteen minutes, then thirty minims, hypodermically; in all cases pulse reduced; in fatal case chloroform was also given.

Dr. J. D. Rushmore—two post-partum cases; recovery in each. First case had only two convulsions following the eating of four boiled eggs. Pulse reduced to thirty-six by single dose (quantity not known) of Squibb's fluid extract, hypodermically; distressing retching relieved by brandy; kidneys not affected; probably any other emetic would have given relief with less discomfort. Second case, primapara; severe headache few hours after delivery, followed by four or five severe convulsions and total loss of sight for twelve hours; some œdema of limbs and albuminuria; fluid extract v.v. given by mouth at first, and afterwards hypodermically; kept pulse between fifty-five and sixty-five; no convulsions afterwards. Pulse sixty twelve hours after discontinuance of the drug; nausea not excessive.

Dr. J. Watt—six cases; two ante-partum; all recovered; dose ten to thirty grains, hypodermically and by mouth. When given hypodermically, only one convulsion followed; pulse kept below fifty-five; no anti-emetics.

Dr. J. C. Hutchinson—verbal communication; one case apparently hopeless; fluid extract given; patient recovered.

Dr. S. Sherwall—verbal communication; one case; ante-partum case; recovery; six minims, hypodermically; one dose; recovery; blood-letting also employed.

The above forty-one reports furnish eighty-five cases of puerperal eclampsia that can be tabulated. Seven of these reports are general, and cannot, therefore, be given in detail. Of the above cases fifty-six were ante-partum and twenty post-partum. Of the whole number of cases sixty-five recovered and twenty died, a mortality of not quite thirty-one per cent. Of the ante-partum cases forty-three recovered and thirteen died, a mortality of thirty and one-quarter. Of the post-partum cases twenty-two recovered and seven died, a mortality of a little less than thirty-two per cent. An examination of the reports of fatal cases shows that in one case epilepsy was present; in another there was extensive pulmonary œdema and probable cerebral effusion; in another death took place in spite of use of venesection, chloroform, morphia and veratrum. In still another case pulse and convulsions were not affected by the drug, and chloroform was also employed. In one case the pulse was reduced to sixty, but the convulsion continued. The remaining cases where death took place seem to have been ordinary cases of puerperal eclampsia.

In the cases of recovery and death as well, the drug seems to have been given, with one or two exceptions, in moderate rather than heroic doses—five to twenty or thirty minims of tincture or Norwood's tincture or fluid extract, preferably, hypodermically or by the mouth, in intervals varying from twenty minutes to several hours. The testimony, with few exceptions, shows that the remedy will reduce the pulse in frequency and sometimes in force, and the effect can be maintained by careful administration of the drug. It is also a notable fact that the nausea and vomiting were not sufficiently urgent to require relief, although the medicine was given in moderately large doses, both by mouth and hypodermically. The fatal results could never be attributed to the remedy. The results of eclampsia have, until recent years, shown a mortality of about one death to three or four cases. In 1855 Barker found the mortality to be thirty-two per cent. in cases occurring before and during labor, and twenty-two per cent. in those after labor. While since that date the mortality has fallen to fourteen per cent. Dr. Phillip Grey (Hospital Report, 1870) reaches the same conclusion, and shows that the substitution of chloroform for indiscriminate bleeding is to be credited with the diminished mortality. In view of these facts not much can be claimed for veratrum viride as regards final results in cases reported in this paper.

Further and much more extended experience is needed before a reliable and discriminating judgment can be found in regard to the efficacy of veratrum viride in the treatment of puerperal eclampsia.

To Dr. Herbert Fearn, of Brooklyn, belongs the credit of having first introduced to the profession the use of veratrum viride in large doses in the treatment of puerperal eclampsia. This experience was reported to the Kings County Medical Society in 1869, and his paper on the subject was subsequently published in the *American Journal of Obstetrics*, etc., for May, 1871.

Veratrum viride seems to have been used by the physicians in Kings County, to some extent, in acute inflammatory and febrile affections, when the heart was sound; in early stage of disease, such as pneumonia, pleurisy, peritonitis, bronchitis, acute catarrh, orchitis, rheumatism, malarial fevers, also in aneurism, uræmic convulsions of Bright's disease, both acute and chronic, cardiac disease when the heart was not weak, ephemeral fever with high temperature, and in other conditions as an antipyretic; in neuralgia, puerperal mania, epilepsy, compression of brain, etc. In these cases the doses given is almost always a small or medium one, varying from one-fourth to three drops (minims sometimes specified) of fluid extract, or two, six or eight drops of tincture (Norwood's sometimes specified) generally given by the mouth; and no nausea or vomiting, with two or three exceptions, is mentioned as having occurred in any cases reported. In general diseases, when convulsive action is manifested, the preference is given for method suitable in puerperal convulsive cases—five to fifteen or twenty minims of fluid extract or tincture, hypodermically. A few reporters have had unsatisfactory experience in failing to get desired effect, or in over-action, sometimes of an alarming character, and given up the use of the drug and employ aconite in its place, or have used aconite from the beginning, and are disposed to stick to the use of a drug with which they are familiar from experience.

The following conclusions seem to be fairly deducible from the foregoing somewhat limited experience; that veratrum viride is employed by the profession in Kings County to a very limited extent; that, except in the treatment of puerperal convulsions, it is used in the method commonly recommended by the text books; that, in the management of puerperal eclampsia, it has been administered in large and sometimes heroic doses with no poisonous effects in most cases; and, where alarming symptoms have developed after its use, they have easily been relieved by usual remedies; that in health a large dose may produce both very alarming symptoms and death; that a tolerance of the drug is produced by vascular tension, common to many diseases; that it is a safe, certain and manageable vascular sedative; that, in order to control the convulsions of the puerperal state, it must be given in doses sufficiently large to bring and keep the pulse down to about sixty beats per minute, and that thus far it has given a mortality of thirty-one per cent.

DISCUSSION.

Dr. Jewett—The number of cases which I have treated by this means is twenty-one. I have used this measure in nearly every case that I have seen for the last few years, particularly for the purpose of demonstrating the value of this drug, and for this reason I have more confidence in this than in any other measure that I know of for this purpose. Most of these cases were cases which I have seen with other physicians, and many of them are doubtless included in the summary contained in the paper already presented. Of these twenty-one cases, six, I believe, died. That would make a mortality about as reported—about twenty-five per cent. to thirty per cent. There were only three cases which died directly or indirectly from the effects of the eclampsiac attacks, and the three out of the eighteen would make a mortality of about sixteen per cent., which is a lesser mortality than the average obtained by ordinary estimates. However, statistics are unsatisfactory, and especially so in these cases, for the reason that other treatment has been used in nearly every case. For example, chloroform, which is a valuable agent, was used in almost all these cases, and is undoubtedly entitled to a considerable degree of credit; but it cannot be used for any continued length of time, as it would be liable to lead to injurious effects. Other treatment has also been used in these cases, and it would therefore be hard to say how large a measure of credit belongs to the veratrum.

But there are only two things in regard to veratrum viride I would like to state. In my experience in every case, with a single exception, the use of that drug has reduced the pulse promptly to about 60; it has been possible by the proper use of the drug in every case but one to bring the pulse below 60. That case was one in which the pulse could not be reduced below 100, and the eclampsic attacks could not be controlled. I have therefore come to regard this drug as a sheet-anchor, for the reason that I can rely on it implicitly in any ordinary case to bring the pulse below 60.

The preparation which I have used has been, with two or three exceptions, Norwood's extract. In regard to the dose, my experience leads me to think that the best method of administering the drug is in a fairly large dose at the start, in order to bring the patient promptly under its influence, and I have therefore given from 10 to 20 minims of the fluid extract as a beginning dose. The full effect of this dose will usually be developed within about thirty minutes, and then it may be repeated as may be required.

Another point in its administration which I think is equally important, is the necessity of giving it by the hypodermic method; it is ordinarily unreliable when given by the stomach, but you are quite certain, by the hypodermic method, of getting the full effect.

While, therefore, I hold in regard to the use of veratrum viride in eclampsia that, as it has been used with other agents, my experience is not conclusive as to the value of the drug altogether, I think it is conclusive enough as to the certainty with which we can control the patient's pulse.

In regard to the use of the drug in other cases, I have used it in a few cases of uræmia and with extremely satisfactory results. In those cases, however, the drug is used in a much smaller dose. In one of those cases there was a profound collapse; such that the by-standers supposed that the child was dying.

Dr. J. Watts—Dr. Rushmore, in his first paper referring to veratrum, speaks of its being introduced in 1869 at a meeting of the Kings County Medical Society—at that meeting I was present. Two years passed before I had occasion to use the veratrum viride in cases of puerperal convulsions. That case happened in the family, the wife of a prominent minister of this city, and I was very anxious about her. I gave her first five-drop doses, although Dr. Fearn had said teaspoonful doses. I found she had two or three convulsions before I came back again. I have ordered her five-drop doses every three hours. When I came back again I ordered 30 drops, and I found the pulse, in about two hours afterwards, came down to 60. I then gave her ten-drop doses, following that every two hours, and found the pulse came down to about 40. I became very much frightened and sent for Dr. Skene. In the meantime the family had become alarmed about her condition and sent for Dr. Gregory, who lived somewhere in New York, about Ninetieth Street, but who has since died. We met there, and her pulse at that time was 45. We talked the matter over carefully, and they said to me, "Doctor, give her 5 drops more." And I assure you I breathed freer than before. In other cases I have been in consultation and advised the gentlemen to give 15 drops hypodermically, and that has been refused in one or two cases for fear it would cause death, but I said I would assume the responsibility, and in any case I have given it I have not known it to fail. I have always used Norwood's tincture, I do not know why, but I have not had confidence in the other tinctures. I can tell Norwood's tincture when I see it, and I know whether I get it or not; but I have had no experience with the fluid extract.

One point in the matter is that when the patient's pulse reaches 60 or 65, he is sure to go into convulsions; there is no possibility of a doubt about it. His pulse must be kept below 55, or else you will have no good effect from the veratrum viride. I repeat that the pulse must be kept below 55 to get the effect. If it goes above 60 or 65 the convulsion is sure to occur.

I have so far been unable to ascertain, and I do not know at the present time what peculiar effect the veratrum viride has, and I ask if any one here can tell me exactly. What is its peculiar effect upon the system, excepting that he says it controls the spasm?

But one thing I want to impress upon the gentlemen, that you must get the pulse below 55; but, while you are doing that, you must do something else; you must get the kidneys to working; you must not forget your potash and your hot water applications to the back to get the kidneys into condition; and then, as soon as the albumen disappears, discontinue your veratrum viride.

Dr. W. H. Williams—Mr. President: I have not had a case of eclampsia since the veratrum viride has come into use. For many years I was accustomed, when I had cases of that kind, to treat them as I was taught in our student days—by bleeding, antimony, etc.; and for some fifteen years I think I did not see a single fatal case; but at a later period I did. I began to have doubts about the propriety of bleeding, and saw one case where I was sure that I did my patient harm by letting too much blood. The case did not terminate fatally, however. I am sure, if I should have a case now, I would try veratrum viride, and would use it hypodermically; for, as you have stated, the stomach may be in such condition that it will not absorb the drug, which would thus be prevented from producing its proper effects. In one instance I gave to a man, some fifty or sixty years of age, the fluid extract of veratrum viride, five drops, which produced alarming prostration—no fatal or serious effect—but he was much alarmed and felt exceedingly bad at the time. It soon passed off, however.

NC Med J (CS.) 20: 304, # 5, Nov 1887.

THE DOCTOR'S HORSE.—What, in part, a doctor's horse should be, as seen by one on the border line: Be it gelding or mare, it should not be large or small, weight close to one thousand pounds for road or city; it should have small, pointed, quick-moving ears; large, bright, prominent eyes, no deep cavities about them. Face should be broad—broad between the eyes. Nose straight, nostrils large. Head, as a whole, small, throat thin, enlargements about the cartilages, neck arched, mane moderate in quantity and length. Breast only moderately broad or full. A great breadth indicates weighty strength and slowness of motion. The other extreme implies want of lung-capacity. Chest and body should be moderately full; abdomen should not taper rapidly or appear tucked up—it indicates feeble digestion. When driving, the dejections should be studied; well moulded and moderately firm balls are desirable. The limbs straight, upper arm full; lower, good-sized, not small or thin; feet large, round, spreading, concave underneath. Hind-legs straight in line of long bones, not fine; feet good-sized, not so large as fore-feet. Coat fine, not too long. Now, Mr. Young Doctor, after driving the horse, if his style and action suit you, go to the stable, see him led into and out of the stall; wait until he is fed. If oats are given him, or any other grain, and he plunges into them with a will, chews actively, works as though he enjoyed his meal and is in a hurry to get them eaten up, buy before you leave the stable, if the price suits you. Of course, you should know whether or not there is existing disease of any kind- In earlier life I bought on a warrant. The brown horse generally is sound, kind, and free from all manner of tricks.—*Medical Record.*

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN WILMINGTON, N. C.

Thomas F. Wood, M. D., Wilmington, N. C., } Editors.
Geo. Gillett Thomas, M. D., " }

☞ *Original communications are solicited from all parts of the country, and especially from the medical profession of* The Carolinas. *Articles requiring illustrations can be promptly supplied by previous arrangement with the Editors. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to the* Journal, *by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to* Thomas F. Wood, M. D., *P. O. Drawer* 791, *Wilmington, N. C.*

THE QUARANTINE OF NEW YORK—CHOLERA.

In vain do quarantine officials and newspapers declare that there is no danger of the importation of cholera into New York. The whole country is looking anxiously to the only barrier between us and the cholera, viz: the New York Quarantine, and no doubt its efficacy will have to be shown by actual inspection of those capable of the task before confidence will be restored. Dr. Smith, the quarantine officer, is able, and has at his command large means, but there are so many ways that cunning persons, who have large personal interests in trade, or who are not willing to submit to the requirements of the station, can elude all vigilance, that it would be too much to expect that they will not find a vulnerable point in the quarantine.

The *Medical News* sends out an extra issue of the date of October 29, giving a report of the Committee of the College of Physicians of Philadelphia, "appointed to investigate the efficiency of our quarantine arrangements for the exclusion of cholera and other epidemic diseases." After examining the quarantine at the ports of New York, Philadelphia and Baltimore, they point out the serious defects of the quarantine appliances—including disinfection, inspection and hospital facilities. This is a grave matter and should call forth from all interested cities a disposition to aid actively in making the quarantines of all sea-coast cities better. The committee above referred to suggests that it is not fair that New York and other cities should bear the great expense of quarantine, and that it should be provided for by the Government. In this respect we do not agree with the Committee. New York, Philadelphia and Baltimore are amply able to keep up good quarantine. A failure to do so will damage them more than the cities dependent upon them, and this motive will be sufficient to bring the quarantine up to a good condition, at their own expense. A contingent fund for quarantine purposes ought to be issued by the Treasurer of the United States, only when urgently needed.

Whatever shape the movement may assume, now is the time to make it.

GUESSING AT DOSES.

The hardships and inconveniences of a country practice is a large part of the experience of our readers. Practising on horseback or in a sulky, as in great part it must be done by reason of the roads, does not afford many opportunities to carry to the bedside a large supply of medical or surgical instruments, but in this limited space everything supposed to be needed has to be carried.

A long experience generally enables the doctor to reduce the number of his medicines to two dozen and oftener less, and his surgical appliances to a pocket case, a hypodermic syringe and a pair of forceps. He cannot be burdened with more—he gets wonderful skill with, and confidence in, these. At first he gives his doses with precision, always resorting to his scales and graduate measure. It is not many years, though, when, having educated his hand and his eye in portioning doses, he no longer thinks it necessary to resort to his measures and weights, even for such potent drugs as morphine and strychnine. It is remarkable how expert one can become in dividing doses into as small portions as eighths of morphine and grains of quinine and blue mass. But even among those who have the greatest skill we doubt if there is a physician who could reasonably defend such practice. Besides making the dispenser over-confident, and so leading him to commit mistakes, it inculcates a habit of guessing and general inaccuracy which is likely to overrule all he does. Furthermore, the physician who practices in this loose way, in a case of fatal error could not defend himself as to the dose given, and might bring sorrow and trouble upon himself. Still further, the practitioner who really studies his cases ought to know what he is giving his patient if he expects to master therapeutics. Lest it should appear idle talk to present such a subject, the writer of this can affirm that such careless and slipshod methods have been known to him, and that among physicians of good standing, and we think it has lead to general slovenliness in other matters of practice.

It may be said in defense that it is not possible to carry scales and measures about in such limited room, but this can no longer hold good now. Pharmacists have produced pills and fluid extracts in such concentrated form that in a pocket case which can be easily carried in the overcoat a supply of medicine can be carried equal to almost any emergency, having the advantage, too, especially as to pills, that they are of reliable weights, and owing to solubility are as active as need be. The physician who fails to take advantage of all that pharmacy has done for him will fall behind in the race. At any rate, there is no excuse for the habit of guessing at doses, and it should be abandoned.

REVIEWS AND BOOK NOTICES.

Treatise on Human Physiology for the Use of Students and Practitioners of Medicine. By Henry C. Chapman, M.D., Professor of the Institutes of Medicine and of Medical Jurisprudence in Jefferson Medical College. Pp. 945. Lea Brothers & Co., Philadelphia, 1887.

A careful perusal of this volume shows that it bears out the intention which the author declares in his preface of preparing a "work representing the existing state of physiology * * * based upon comparative and pathological anatomy, clinical medicine, physics and chemistry, as well as upon experimental research."

The arrangement of the book does not differ from other text-books on the same subject, and opens fairly in the VIth Chapter with digestion. After describing the comparative anatomy of the masticatory organs in this chapter, the next one is devoted to insalivation and deglutition, and the next three chapters are devoted to stomach and intestinal digestion. Around this part of physiology still hangs an absorbing interest. Although perhaps the best worked, if not the best known section, read again and again, we are attracted by the revelations which study and observation have brought to light of these wonderful processes. Then, too, our knowledge of stomach digestion was first taught by the experiments of the American Dr. Beaumont, giving the key to all subsequent researches. Prof. Chapman makes it plain that the work of Beaumont is not duly accredited as being the foundation of all our present knowledge of stomach digestion. He says there is a widespread belief that this knowledge was obtained by the observation made through fistulæ in dogs, but he reminds us that the first of such operations was done by Bassou, the Russian naturalist, and was suggested by Beaumont.

There is no necessity of attempting an analysis of such an elaborate work if we had the time and the ability to compare it with the recent works on physiology, but the points which strike us as we go along are that practical matters—those which have a practical bearing upon the practice of medicine—are lucidly expressed; purely technical matters are given in minute detail; elaborate directions are stated for the guidance of students in the laboratory.

The chapter on electricity is unusually elaborate, but very necessary, because that few medical students have elementary education enough in physics to get along without it, and because the advance of Electrical Science requires it.

In every respect the work before us fulfils its promise, whether as a complete treatise for the student, or for the physician grown rusty in the elements; for the former it is so complete that he need look no farther (indeed few courses of medicine will go nearly so far), and for the latter, who is not entirely given up to the corrosive effects of indolence, he will find entertainment and instruction for many a long month, and an admirable book of reference.

One feature of the book is worthy of special note, viz: the full manner in which the history of physiological discoveries is treated. Eighteen pages are devoted to the history of circulation, a history for which the majority of students would never trouble themselves to go beyond their text-books, but without which no physician could have an adequate conception of the science which is built upon it.

From such short and practical expressions as that "the heat generated by an adult in twenty-four hours is sufficient to raise fifty pounds of water from the freezing to the boiling point," to the mathematics of refraction and accommodation, is an intellectual excursion which will doubtless attract numerous readers. We know of no volume on physiology that treats so fully of every topic embraced in the sciences, and American medicine truly is honored by its addition to our growing literature.

THE CHEMISTRY OF NITROGEN AS DISCLOSED IN THE CONSTITUTION OF THE ALKALOIDS. By Albert B. Prescott, M.D. Pamphlet, 20 pp.

This paper was read before the American Association for the Advancement of Sciences. Professor Prescott is Professor of Chemistry in the University of Michigan, and a member of the Committee of Revision of the United States Pharmacopœia, 1880. He needs no introduction from us. We are indebted to him for this presentation of the nitrogen compounds, a subject which is of absorbing interest to the profession of medicine just now, as it involves the new compounds—antipyrin, antifebrin, thalline, kairine, etc. Prof. Prescott says: "At the present time there appears a degree of encouragement that the synthetic manufacture of the alkaloids, hitherto obtained from plants, will sometime be realized as an industry. Not from the chance efforts of ignorant dreamers, nor from any premature short cuts of special attempt, but, if at all, from the well-earned progress of the science of the world will these results be accomplished. * * * It should not surprise us, if, at any time, artificial alkaloids should assume a commercial importance rivalling that of articles already brought into general use, such as carbolic and salicylic acids."

A REFERENCE HANDBOOK OF THE MEDICAL SCIENCES. Edited by Albert H. Buck, M.D. Vol. V.

The present volume of this great work covers the ground from MIL to POT, and comprises 812 pages. There are many notable contributions besides those of the usual good quality, of which we have not space for enumeration.

Under the head of Orthopedic Surgery we have a reproduction of the early appliances for curved spine, which date very far back into the past, long before the present school of orthopedic surgeons had come upon the stage, and so all sorts of history—medical as well as political—repeats itself. After all, the credit is due to the men who have the genius to establish and make practical a discovery, rather than to the original discoverer who lacks this merit.

If we discover in some of the wood-cuts a falling off in execution, the chromolithograph is good in quality.

This treasury of medical knowledge still keeps the place it first achieved in medical literature, and it is not too early to say that it is a successful achievement. No physician's library can afford to be without the Reference Handbook of the Medical Sciences.

OVARIAN TUMORS AND REMARKS ON ABDOMINAL SURGERY, WITH THE RESULT OF FIFTY CASES. By Edward Borck, A.M., M.D.

This is a very interesting pamphlet, nothwithstanding decidedly a German air about it. The author, who is Professor of Surgery in the College for Medical Practitioners, in St. Louis, gives a good lecture on the diagnosis of ovarian tumors, another on the method of performing ovariotomy, and still another giving the result of fifty cases. Incidental to the narrative of his cases, he makes remarks on the state of ovariotomy in St. Louis. He says: "The surgeons in St. Louis had not been very successful with ovariotomy.

The bad results were attributed to the atmosphere—they said that malaria in our climate acted so detrimentally upon these cases. It was taken for granted that every patient operated upon would die, etc., etc. Dr. Borck describes a condition of things that was not confined to St. Louis. Ovariotomy has advanced so rapidly that ten years carries us back into the stage of small beginnings, not only for St. Louis, but for all the towns in the South, certainly.

The pamphlet is full of interest and in many respects unique. We are glad to have had the opportunity to read it.

A PRACTICAL TREATISE ON THE DISEASES OF THE HAIR AND SCALP. By George Thomas Jackson, M.D. 1887. E. B. Treat, 771 Broadway, N. Y. Price $2.75.

The author is instructor of dermatology in the New York Polyclinic, and feeling the necessity for a work on diseases of the hair of a recent date in English, he undertook studies which resulted in this volume. We believe he is mistaken in saying there is no work in English, for if we remember correctly, Prof. Leonard has given us a treatise on the same subject.

The first part of the volume is devoted to the anatomy, physiology and hygiene of the hair, the second to the essential diseases of the hair, the third to parasitic diseases of the hair, the fourth to diseases of the hair secondary to diseases of the skin. The bibliography of the volume is very complete and adds largely to its value.

We believe this volume will be of permanent value to the profession whose practice brings before them the difficult and troublesome cases of which this book treats.

THE ESTIMATION OF QUININE BY KERRER'S METHOD, by E. A. Ruddiman, Ph.C.,

Is contribution No. 1 from the School of Pharmacy of the University of Michigan. This method has been adopted by the United States Pharmacopœia, and this critical examination of the method is well done, but will interest pharmacists more than our readers.

CYCLOPEDIA OF OBSTETRICS AND GYNECOLOGY. Anatomy of Internal and External Genitals, Menstruation and Fecundation, Normal Pregnancy and Labor, etc. By Dr. A. Charpentier. Vol. I.

This great work has progressed to the ninth volume, including everything in the range of obstetrics and gynecology, by French and German authors. The work is beautifully printed in handy 8vo.

volumes, and handsomely illustrated. The subjects have been distributed among those authors gifted in given specialties, the result being admirable treatises, which are already standard in the world of medical literature. It is not necessary to do more than invite the attention of our readers to this cyclopedia, as nothing but a thorough examination would show the merits of these volumes.

A MANUAL OF ORGANIC MATERIA MEDICA, BEING A GUIDE TO MATERIA MEDICA OF THE VEGETABLE AND ANIMAL KINGDOM. By John M. Maisch, Phard.D. Third Edition. Lea Brothers & Co. 1887.

We have formerly taken occasion to commend this excellent guide to materia medica, and it is not now necessary to say more than to commend it to medical students. In no department of medicine are students so ill-informed as in materia medica, and to most of our physicians, who are of necessity their own druggists, is such knowledge indispensable. The recognition of drugs, a knowledge of their properties, sources, and a thousand other little things which are taught in this book, should be very familiar to every Southern doctor. The size of the volume commends it, and the illustrations are as good as we have seen, even in the more expensive books. In truth, we can say that we seldom see so handsome a specimen of the typographic art.

A MANUAL OF THE PHYSICAL DIAGNOSIS OF THORACIC DISEASES. By E. Darwin Hudson, Jr., A.M., M.D. New York: William Wood & Co. 1887.

In the preface of this book we learn from the editor, Dr. Laurence Johnson, that Dr. Hudson died just as his work was ready for the printer. The author was Professor of Medicine in the New York Polyclinic, and this work is the outgrowth of his needs as a teacher.

A careful examination convinces us that it is thoroughly practical, as succinct as a volume can be written to convey clear ideas, and will suit the wants of students who are learning the principles and practice of diagnosis of chest diseases. The book has the decided merit of being complete and easily comprehended.

In Chapter VIII. is given synopses of heart disease—the pathology, causes, symptoms, physical signs, diagnosis, prognosis and treatment are given in tabular form.

We have no doubt this useful little volume will meet with general favor, and have a large sale.

CORRESPONDENCE.

IS IT RIGHT?

Messrs. Editors North Carolina Medical Journal:

Dear Sirs:—During the last few years a considerable number of those who applied to the Board of Medical Examiners for a license to practice medicine in North Carolina have been found incompetent, and in consequence have been rejected by said Board. But a number of these rejected men are still practising medicine contrary to the law. Now, I would like very much to know in what relation they stand to the regular profession. Is it right and proper for regular bred physicians, and more especially members of the North Carolina Medical Society, to meet these men in consultation? Is it right to call them in consultation? Can we either call or be called with such men?

Please give us much needed light upon this subject, and very much oblige Inquirer.

[In reply to the question of our esteemed correspondent, we answer that a candidate rejected by the Board of Medical Examiners stands in the same relation as any other private citizen, and if he persists in practising medicine is liable to the legal penalty attached for such misdemeanor.

In answer to the second part, we would say that we consider it highly reprehensible for any legal physician to consult with or have any professional relation [except as tutor] with an unlicensed doctor. More especially would it be wrong for a member of the Medical Society of North Carolina to aid in breaking down the barriers which he has helped to erect for the good of the people and the profession.

The courts have been remarkably lenient, so far, with unlicensed practitioners, but a few cases vigorously prosecuted would clear the medical atmosphere, and we trust that our Superior Court Judges will charge grand juries upon the law regulating the practice of medicine in the State, and that Solicitors will do their duty.—Eds.]

CURRENT LITERATURE.

BORIC ACID FOR STERILIZING URINE.

The two prime dangers in the operation of internal urethrotomy are urethral fever and hemorrhage, presuming, of course, that the operator has assured himself of the soundness of his patient's kidneys before operating. In a recent conversation with an eminent surgeon of one of the New York hospitals, he remarked in response to a statement that I made, that "the millenium in urethral surgery would be reached whenever the means was discovered of sterilizing the urine by internal medication." The ground for this strong statement was the fact that urethral fever, that dread of operators upon the urethra, is due to infiltration of the tissues of the body by a germ-laden urine.

About the only attempt that has, up to quite recently, been made to prevent urethral fever from following urethrotomies and kindred operations, has been the internal exhibition, prior to the operation, of quinine and the subsequent use of antiseptic injections. My remark that called forth this surgeon's statement was to the effect that we can, by the free administration of boracic acid for twenty-four hours before, and for some days subsequent to the operation, render the urine absolutely sterile, and thus, without any quinine whatever, escape all danger of urethral fever. At that time my experience with this agent thus given was hardly sufficient to warrant a positive assertion. Something less than a year ago I ordered, in a case characterized by purulent and fermenting urine, the exhibition of boric acid in ten-grain doses. The effect for good was so immediate and striking, that I determined to use the remedy instead of quinine in my next urethrotomy, having several times previously, encountered severe fevers in this operation, despite the free exhibition of quinine.

In some forty subsequent urethrotomies, several for strictures of small calibre, a number under adverse circumstances, I have had but one case of urethral fever. In that case, operated upon in the practice of a neighbor physician, last month, for stricture of small calibre in a negro, the attendant, by some misunderstanding, omitted the boric acid after the first subsequent day. A violent chill, with temperature of 105° rapidly following, occurred on the third day. The bladder and urethra were at once washed out with boracic acid, and its internal exhibition in twenty-grain doses renewed. Happily the patient recovered, having served, if but in a negative way, to demonstrate the value of boracic acid as an internal antiseptic. I usually employ ten grains in compressed tablets every three hours, though as high as thirty grains every three or four hours may be given without any irritating or otherwise injurious action upon the alimentary canal. I should, of course, mention that full antiseptic precautions are always employed as regards the instruments used, and that in most cases I also wash out for several days the bladder and urethra with an ordinary hot boric and bichloride solution—an admirable means, by the way, for arrest of hemorrhage, in addition to those already laid down in works on the treatment of stricture. The misgivings with which I formerly performed this wonderfully salutary operation are wholly gone. Hemorrhage, the other danger, is growing more and more rare under improvements in instruments and operative procedure, and when it does occur is ordinarily easy of control. Cocaine, of course, has fully demonstrated its value in penile surgery. The sterilizing bath which I use for my instruments is a saturated solution of hydronapthol. It is much superior for that purpose to carbolic acid.—*Dr. E. R. Palmer, American Practitioner and News.*

HÆMATOZOA OF MALARIA.

The *Journal des Connaissances Médicales* of July 21st and 28th, 1887, publishes an interesting study on the hæmatozoa of malaria by Dr. Laveran, which had first appeared in the *Annales de l' Institut Pasteur*, No. 6, June 25th, 1887, p. 266. In this paper he describes the different elements he has met with in the blood of subjects affected with malaria. The most common of these are free spherical bodies, present in the blood serum. These transparent corpuscles are of variable dimensions, from one-thousandth of a millimeter in diameter to a size slightly greater than that of red blood corpuscles. The largest contain pigmentary granules, sometimes of regular form, sometimes arranged in the form of a crown. There are at times two, three or four pigmented bodies attached to one red corpuscle, which becomes more and more pale as the parasitical elements increase in number and finally disappears. These spherical bodies have no nucleus, but when colored with carmine show a double periphery. They have a double movement: one from place to place, and one of rotation. There are also filaments, extremely thin and transparent, three or four times the diameter of a blood corpuscle, adhering by one of their extremities to the periphery of the vessel, the other extremity being free. Their free extremity is slightly enlarged; this swelling is sometimes in the middle. They perform rapid and various movements, which they communicate to the blood corpuscles with which they are in contact. These filaments are known as flagellæ. M. Laveran has also met with bodies of crescentic form. These are represented by crescentiform cylinders pigmented towards the middle. They are transparent and colorless, and are rarely attached to the blood corpuscles. There are also nearly always oval bodies that seem intermediary between the spherical and the crescent-shaped bodies. These do not show any movement whatever. Lastly, Mr. Laveran found in the blood of malarial patients what he calls irregular transparent pigmented *en rosace*, which are more or less irregular in form, motionless and pigmented, and also a fifth kind of element, the *leucocytes mélaniferes*, which are not, strictly speaking, new elements, but are simply white corpuscles containing pigmentary granules. The number of these granules varies from one to ten or more. M. Laveran believes that these pigmentary granules are produced by the destruction of the parasitical elements, which had formed pigments by destroying the red corpuscles. M. Laveran affirms that, out of 480 patients suffering from different stages of malaria whose blood he had examined, he had in 432 cases met with the elements the shape of which has been described above. In the other cases where they were not met with, the patients had already taken large quantities of quinine or were cachectic subjects no longer having fever attacks. Experiments confirmatory of the above were made on the blood of malarial patients from France, Algiers, Corsica, Seneca, Madagascar and Italy (Roman Campagna), with identical results. M. Laveran never met with these parasitical forms elsewhere than in the blood of malarial patients. After describing the hæmatozoa that he found in the blood of malarial subjects, M. Laveran passed in review the latest publications on the subject, and drew attention to the fact that all those who at first opposed his views have now come round to them. The following are his conclusions: The connection between the hæmatozoa described and the phenomena of malaria is incontestable; these hæmatozoa have never been met with elsewhere than in the blood of patients suffering from malaria. The development of these parasites in the blood is intimately connected with the formation of pigment. It is immediately before febrile paroxysms that these hæmatozoa are most abundant in the blood. Cinchona bark, the specific for malaria, causes the hæmatozoa to disappear together with the fever. Lastly, malaria can be communicated from man to man by injection of the blood of a patient suffering from the disease.—*Paris Correspondent of the British Medical Journal.*

INTERNAL TREATMENT OF ANEURYSM.

The first best thing to do with a patient suffering from aneurysm is to put him to bed, and, if convenient, keep him there. We thereby lessen his heart's action by at least six beats per minute. Then take an accurate record of his pulse every day at a fixed hour for several days; we thus get his normal pulse-rate when recumbent. Iodide of potassium may now be prescribed in doses of ten grains night and morning, to commence with. Note the pulse-rate again for a few days; if it should remain undisturbed, increase the iodide one-half; if the pulse be raised, reduce the dose again to ten grains, and persevere with it. In two or three months there will most likely be an improvement, possibly even a cure, if the case has been taken in good time. This treatment lessens the force of the heart and lowers the general blood-pressure, by dilating the arterioles; the aneurism is thus no longer dilated with each pulsation, and the sac walls act like a hollow muscle opposed to an obstacle with which it can successfully cope, so becomes gradually hypertrophied, while the sac diminishes in calibre. To produce this hypertrophy the blood-tension must not be lowered too much; hence it is of the last importance to watch the pulse-rate, as a rise indicates too much depression. During this treatment, which has proved very successful, alcohol must be prohibited; but the patient need not be kept on too low a diet otherwise. Subcutaneous injections of morphine or codeine may be employed for the relief of pain.—*Medical World.*

REMOVAL OF NEEDLE FROM HEART.

NC Med J (O.S.) 20: 318-319, #5, Nov 1887.

STETZNER:—A student, after a spree, sought to commit suicide by driving a sewing needle into his heart. Twelve hours after the introduction of the needle the first serious symptoms made their appearance. He then had pain in the cardiac region, difficulty in breathing, and a loud pericardial murmur at the apex. After thirty-six hours the symptoms became so very serious that an operation for the removal of the foreign body was determined upon. No trace of the needle being found either under the skin or in the intercostal space, a piece of the fifth rib was resected, thus opening up the left pleural cavity; then the pericardium was opened up, and about a teaspoonful of cloudy pericardial fluid ran out, and now the needle could be felt lying diagonally in the right ventricle. They succeeded in driving its head on through the anterior wall of the heart, and then fixing it in this position with the finger-nail. The irregular and violent beating of the heart made it very difficult to catch the foreign body with the forceps, and, in attempting it, it again slipped into the ventricle, but this time assuming a vertical instead of diagonal position, rendering it impossible to make any further attempt at its removal; and besides this, an iodoform tampon, used to block up the hole into the pleural cavity, was drawn into the cavity by a very deep inspiratory effort. The tampon could not be found again. The wound was thoroughly tamponed, and the patient recovered in four weeks, although in the meantime he had suffered from a severe pneumo-thorax, with copious exudation. At present the patient enjoys good health, and feels no effects from his escapade. There is neither heart murmur nor abnormal pulse, nor any trace whatever of the pleural exudation. Where the needle now is, is, of course, mere matter of speculation; it may be in the heart, or it may have gone on into the mediastinum.

Dr. Iver Hardt has collected together, out of medical literature, twenty-two cases of needle in the heart, of which nineteen were found accidentally on making autopsies. In three cases the needles had been driven into the heart accidentally, and penetrated such a short distance that they were easily extracted.

No case similar to the present, in which the heart has been laid bare by splitting the pericardium, is mentioned in medical literature.

DISCUSSION.

Hahn, of Berlin, showed the half of a knitting-needle, which V. Bergmann had removed from the heart of a girl eleven years of age. It had been driven into her breast by a blow from a slipper. The patient suffered immediately from asphyxia, and was removed to the hospital. Under the left third rib, between the parasternal and mammillary lines, a black point could be seen, which was felt to be the end of the needle. There was a blowing, systolic murmur at the apex. As the needle was slowly withdrawn, it was seen to have a distinctly pendulum movement. Immediately after the extraction, the previously very rapid pulse sank to ninety per minute. The needle was withdrawn very slowly, in order to give time for a clot to form in the punctured wound, and thus avoid hemorrhage into the pericardial sack, which, in some cases of punctured wound of the heart, has been the cause of death. Von Bergmann said that he thought there could be no doubt in this case of the puncture of the heart muscle by the needle, because the murmur changed in character while the needle was being withdrawn, and when completely removed, the murmur ceased entirely.—*Centralblatt für Chirurgie.*

WHEN the fetal pulsations number 144 per minute, the sex is likely female; when they are 124 per minute, male. Towards the end of gestation, the pulsations of the male may be a little higher in number, those of the female a little lower.—*Medical World.*

SANTONIN has been found successful as an emenagogue, in ten-grain doses.—*Medical World.*

THE CAUSE OF HEAD PRESENTATIONS.

The current number of the *Edinburgh Medical Journal* contains a report of the proceedings of the Obstetrical Society of Edinburgh, held on the 22d of June, in which the Society discussed a paper by Dr. Foulis on the cause of head presentations, in which the writer insists that the head downward position is caused entirely by the constant extension of the child's legs, by which means the round head is caused to glide over the curved inner surface of the uterus, until it becomes at last fixed over the bony cup of the pelvis, the extension of the lower limbs keeping it there.

The discussion was participated in by such eminent obstetricians as Berry Hart, Matthews Duncan, Carmichael, and James Ritchie.

With some modifications of the theory, we have no doubt Dr. Foulis is correct; but the fact that the suggestion was treated by all these eminent men as original with Dr. Foulis, shows how much American journalistic literature is slighted in the "Athens of the North."

One of the editors of the *Practitioner and News* has for the last five years advocated this theory, and it has not only been published repeatedly in our own columns, but also in the *Medical Record* and *Medical Journal* of New York. However, we shall try to have the matter presented in full to the Edinburgh Obstetrical Society at an early date, when we hope its renowned membership will honor it with a full discussion.—*American Practitioner and News.*

◆

Dryness of the Throat from Excessive Tea-drinking.—Mr. Phillips Hills calls attention to this symptom, which he says is in himself the earliest and surest sign of excess in the use of tea. He says that sometime ago, seeing a patient who was suffering from dry hacking cough and sense of constriction in the larynx, he asked the physician in attendance whether the patient was an excessive tea-drinker, and was surprised to find the symptoms were not generally known. Have any of our readers experience in the matter?—*London Practitioner.*

NOTES.

The Medical Investigator is the name of a new weekly medical journal "on the order of the *Medical Brief*" is to be started in Louisville, Ky., by S. F. Smith, M.D.

GAILLARD'S MEDICAL JOURNAL.—Dr. Porter has retired from the chair as editor-in-chief of this journal, but with the able pens of the present corps we are assured that this standard old monthly will suffer no deterioration. Dr. George Tucker Harrison and Dr. J. Herbert Claiborne, Jr., are the present editors.

THE Calendar of the University of Toronto, Medical Department, just received, is some indication of the condition of this noted school. An examination of the conditions of graduation, and of the questions propounded to candidates for a degree shows that it would not do at present to try to apply them on this side of the line.

DR. HENRY G. PIFFARD, of New York, has devised a method of taking instantaneous photographs at night by the light of a flash of a pistol charged with gun cotton and powdered magnesium.—*Boston Medical and Surgical Journal.* [Not long ago we noticed that a photograph had been taken by light from several fire-flies—Lightning bugs.]

SANTONINE POISONING.—Dr. F. A. Rew reports in the *American Medical Journal* a case of poisoning by a compound of a half ounce each of spigelia and senna and 10 grains santonine, teaspoonful in milk before each meal. He also gave doses of 1½ grains of santonine in powder. In fifteen minutes it showed signs of acute poisoning, and in half an hour the child was dead. [It is evident that more caution should be used in the administration of santonine. Wood's Therapeutics puts the dose at 2 to 4 grains for an adult; for a child two years old ¼ to ½ grain. Two 1-grain doses given within three hours in a child of eight years, and in a two and a half year's old child a dose of four grains caused alarming symptoms. He says the dose must not be repeated within eight hours, and then the second dose should be combined with calomel. It is the custom generally to give the calomel with the first dose.—EDS.]

GRAY'S ANATOMY.—We have received a copy of this standard work carefully revised and printed in colors, but have not time to make further notice of it in this issue. The volume in colors is sold at only $1.25 more per volume, so that in cloth the price is $7.25.

CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS is the name of the new medical society formed by the union of several special societies. The Congress of 1888 will be held in Washington, D.C., September 18.

The following officers were elected :

President—John S. Billings, M.D, LL.D., U.S.A.

Vice-Presidents—The Presidents-elect of all the participating societies.

Treasurer—Dr. W. H. Carmalt, of Connecticut.—*Medical News.*

QUANTITATIVE ESTIMATION OF SUGAR IN URINE BY VOLUMETRIC TEST.—Dr. S. P. Kramer, of Cincinnati, gives in the *Medical News*, October 22, a simple instrument by which he estimates sugar by the volume of carbonic acid gas resulting from the fermentation of urine. The suspected urine is shaken with a gramme of compressed yeast and put aside for twenty-four hours. The flask into which the urine is set for fermentation is connected by a tube which is marked with a scale representing percentages of sugar.

SCARLATINAL POISON DOES NOT COMMUNICATE SCARLET FEVER IN CALVES.—The Committee of the Edinburgh Medico-Chirurgical Society express doubt as to whether calves are at all susceptible to scarlet fever. Prof. MacFadyen injected scarlatinal blood into two calves, and fed a third with desquamated scales. All three gave negative results. It will be remembered that the keystone of Dr. Klein's research is the assumption that cattle can take scarlet fever. Much careful, trained investigation is necessary to settle the points at issue.

DRUGS AND MEDICINES OF NORTH AMERICA, now in its 2d volume, formerly published as a quarterly, will be discontinued as a periodical on the completion of the present volume, but will appear in book form hereafter. It is a very important work to those physicians who are not willing to neglect the materia medica of their native land. In addition to valuable material regarding plants and their habits, with good illustrations, the foot-notes make up almost the history of botany and botanists of America, than which we know of nothing so entertaining. This work makes information accessible which was too scarce before to come within the reach of any but the most favored collectors.

A FALSE "CURE" FOR SMALLPOX.—A very misleading and even dangerous thing it is for a book having the large circulation and the confident readers that an almanac has, should try to give remedies for such a terrible disease as smallpox. One recently issued gravely states that cream of tartar is a certain, never-failing remedy. The remedy against smallpox is simply preventive vaccination, and there is no other.

A PASTEUR INOCULATION FAILS.—The *British Medical Journal* reports the case of a man named Whitley, who was bitten by a rabid dog. He was taken to the Pasteur Institute. He was bitten August 1st and was treated on the evening of August 6. The treatment by injection of the modified virus was kept up twelve days. The man returned home and went to work. On October 2d he felt pain in his bitten arm, and on October 4th died asphyxiated. Little doubt can be entertained that the patient died of hydrophobia.

MEDICINAL LIQUID VASELINE—A NEW VEHICLE FOR HYPODERMIC INJECTIONS.—A liquid vaseline which is a very general solvent of medicinal substances promises to be a valuable article in hypodermic medication. It is procured from the distillation of petroleum found in the mountainous regions of Russia. The oil is not only unirritating itself, but it sheaths and modifies medicinal substances dissolved in it. Among the substances soluble in it are, eucalyptol, iodoform, turpentine, phenol, thymol, iodine, menthol, chloroform, ether, salol, sulphide of carbon, sulphuretted hydrogen, myrtol, cocaine, atropine, aconitia, caffeine, calomel, phosphorus, bromine, etc.—*Boston Medical and Surgical Journal.*

THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES.—This ancient (for America) journal, which for nearly seventy years has been the leader of medicine in America and among the English-speaking nations, will change its quarterly to a monthly form, and reduce the price to four dollars. This is the last of medical quarterlies in the English language, and we read the announcement of the change with regret. The publishers announce that there will be no material change except in the frequency of issue, and we dare say the new arrangement will suit the reading public better. The publishers of "Hays' Journal" have long taken the lead in supplying the profession with the best in every department of medical lore, and still leads.

GLEDITSCHINE—STENOCARPINE FRAUD.—It was a bold thing to attempt to put on the market a bogus local anesthetic. Doctors are very wide awake these days, investigating new remedies, and applying them many times prematurely, so that the therapeutics of a new remedy will be ventilated very quickly. Then the active pharmacal chemists determined not to be the last in producing a new product, bend the energies of their laboratories to this end. Woe, then, to the man who attempts to deceive them. The new fraud had a short run. It is proper to say that the physicians who experimented with the substance used it as it was prepared for them, and are in no way responsible.

OSBORNE'S SYRUP.—Nearly every town or section has its favorite rhubarb syrup, which becomes a household necessity for the babies, or rather for the mothers. The following is the modified formula for a syrup kindly furnished by Messrs. W. H. Green & Co., the original of which was by Dr. Osborne, of New Bern. The original prescription called for Cognac brandy, and burnt sugar was dripped into the syrup, after being burnt by the brandy. Our mountain friends hear frequently of this preparation through the summer visitors from the East and for their convenience we print the formula. Children prefer it to the aromatic syrup of rhubarb, and it is convenient and effectual as a vehicle for powders :

℞.—Rhubarb root		
Anise seed		
Licorice root	āā	ʒ ij
Water, op		Oj
Boil down to ⅔ and add		
Salts tartar		℈ij
Manna		℥ ss
Sugar q. s. to make a syrup and add paregoric		℥ j

Messrs. W. H. Green & Co. use 12 lbs. sugar to gallon of the decoction, after adding the manna.

Ely's Balm, so much used for nasal catarrh and hay-fever, consists, according to the *Medical Record*, of vaseline 1 ounce, thymol 3 grains, carbonate bismuth 15 grains, oil winter green 2 minims. The directions are to dip the finger into the balm and insert into the nostrils, giving two or three deep inhalations.

Leonard's Physician's Day-Book.—This handy book is arranged for thirteen months and is adapted as a perpetual record. It is so contrived as to be a ledger as well as a visiting list. It is well and substantially bound and of convenient shape for the outside pocket. It is issued annually by the Illustrated Medical Journal Company, Detroit, Michigan. Price $1.00.

Death from Eating Toad-Fish.—*Australian Medical Gazette*, *New York Medical Abstract*, gives a report of the death of a Chinaman from eating soup made from toad-fish. Post mortem examination revealed that the stomach, particularly in the pyloric end, was much inflamed, and there was a considerable congestion of other organs. The coroner stated that he knew of a case in which three children died after eating toad-fish, and some cats which ate part of their vomit also died.

The Medical News Visiting-List for 1888, for 30 patients per week, is a handsome pocket-book, having as a preface a variety of tables and instructive matter for which busy doctors have daily need to refer to. The Dose and Therapeutic tables are very complete, and instructions for the ligation of the more important arteries is a new feature. The binding is very ornamental and substantial, and is in every way a most desirable visiting-list. Lea Brothers & Co., Philadelphia. Price $1.25.

American Public Health Association.—We have seen no notice of the late meeting of this Association but a condensed one in the *Medical Record*. We learn that Dr. C. N. Hewitt, of Red Wing, Minn., was elected President, and Drs. G. B. Thornton, of Memphis, and Joseph Holt, of New Orleans, Vice-Presidents. The Executive Committee, Dr. Henry B. Baker, of Lansing, Mich., Dr. S. H. Durgin, Cambridge, Mass., and Dr. J. N. McCormack, of Bowling Green, Ky. Dr. Irving A. Watson, of Concord, N. H., still retains his office as Secretary. These selections will meet the hearty approval of all interested in this, the most important Association in America.

THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.—We notice that vigorous action has been taken, according to previous announcement, in the organization of the above Association. The *New York Medical Journal* has this to say about it: "The organization of this Association, as set forth in the letter from Birmingham, Ala., which we publish in this issue, can hardly fail to promote the advance of those branches in the Southern States; indeed, it will probably exert a notable influence on progress in surgery and gynecology throughout the country. Many of the most illustrious names in the annals of American surgery—particularly gynecological surgery—both of the living and of the dead, are those of men who were either born or educated in the South; and we look upon this movement as a token that that part of the counntry may be counted on to keep up its prestige and stimulate the North to still warmer emulation." Dr. W. D. Haggard, of Nashville, Tenn., was elected President, Dr. R. D. Webb and Dr. J. W. Sears, both of Birmingham, Ala., were elected respectively First and Second Vice-Presidents, Dr. W. E. B. Davis, of Birmingham, Ala., Secretary. Birmingham is selected as the place of next meeting. There is no lack of good material in the South for the successful career of such an association if there is proper leadership.

DR. STERNBERG ON THE NEW YORK QUARANTINE.—The following illustration of the evils arising from the present system of supporting quarantine establishments was cited. It occurred at the port of New York. The speaker said: "With the deputy health officer, who boarded our ship, came a man with a jug. I was informed by one of the officers of the ship that he was to disinfect the vessel. Being somewhat curious to know the method of disinfection employed, I asked the ship's surgeon to go with me to inspect, when, after a detention of less than one hour, we had started from the quarantine station for our wharf. We found that the man with the jug had lowered a bucket by means of a rope through one of the hatches between decks. Upon pulling up this bucket, I found that it contained two or three pounds of some powder which had been wet, probably with an acid solution, and which gave off an odor of chlorine. No doubt, when first lowered between decks, there had been a considerable evolution of chlorine; but in the vast space to be disinfected it was so diluted that, at the end of an hour, I did not detect the odor of chlorine-gas when

I lifted the hatch, and it was only by approaching my nose to the bucket that I was able to ascertain what disinfectant had been used. The most curious part of the story is that I was informed that the bucket had been lowered between decks to disinfect a quantity of hides which were stored in the hold. What was the object of this 'disinfection?' Evidently not to disinfect; for no one at the present day would think of maintaining that the hides in the hold had been disinfected by the procedure of the man with the jug."

The Relations of Practical Pharmacy to Medicine is the caption of an editorial in the *Medical Times* which has truths in it that must be learned sooner or later in the larger cities. As the writer says, "The specialists have plundered their mother until she stands nearly naked. The gynecologist, laryngologist, rhinologist, ophthalmologist, aurist, neurologist, the expert in diseases of the chest, of the rectum and of the genito-urinary system, bid openly for every patient who can afford to pay large fees. The druggist takes the cases of venereal diseases, the dressing of wounds, and the treatment of all minor ailments who do not confine the patient to the house. The balance goes mainly to the hospitals and dispensaries. We dread definitely to state just what is left for the family physician, lest somebody will seize upon it as a new specialty, and leave us nothing! The fact then remains that the druggist is our most dangerous competitor. He is under no professional restraint; he has an insight into our methods; hears of the results of our treatment; and thinks that when he can select the best out of twenty physicians' prescriptions, he knows more than nineteen of them." He asks if there is any remedy for this state of things, and answers: "This method is to go back a few steps and reunite the profession to the business. When the young physician receives his diploma, instead of sitting down in his office, or studying methods of so advertising himself as to keep within the letter of the law, although breaking it in spirit, let him set up a pharmacy. The advantages are as follows: The experience he will gain, in handling drugs, is of the greatest value. He will profit by this through his whole future career. The experience he will obtain as a physician, from one year in a drug store, will be more than he would receive from five years of practice." Such a state of things has not reached the sunny South, simply because the population is not dense enough, but counter-prescribing is a growing evil. The suggestion, though, of returning to dispensing of medicine by the doctors in some circumstances would be advantageous to the young physicians, many of whom have slim enough knowledge of pharmacognosy and pharmacy to need all such aid.

Dr. William Selden.—Dr. William Selden, an old and prominent citizen of Norfolk, Va., and the wealthiest capitalist in this section, died November 7th. Dr. Selden was born in Norfolk, Va., in 1808. He studied at the University of Virginia, and took his degree of M.D. at the University of Pennsylvania, in 1830. After spending two years in study in the hospitals of Paris and London, he established himself in practice at Norfolk. He was a surgeon in the Confederate Army, and had made a number of contributions to medical literature, among them a "Report on the Yellow Fever in Norfolk and Portsmouth in 1855."—*Medical and Surgical Reporter.*

READING NOTICES.

A Perfect Liquid Cathartic.—I have been using your Elixir Purgans in my practice and find nothing to equal it as a cathartic and laxative for women and children.

A. E. Haskinson, M.D., Columbus, Ohio.

Cablegram—London, Oct. 25th.—W. R. Warner & Co., Philadelphia, received highest award from American Exhibition in London for superiority of their Sugar-Coated Pills and Effervescing Salts.

W. H. Blythe, M.D., Mount Pleasant, Texas, writes: "I used Lactated Food in a case of dysentery. A little girl, six years old, was confined to her bed nearly four weeks. Eat she could not, yet eat she must or die. I bethought me of Lactated Food—it was well I did. In it her feeble digestion found what it required. I believe the Lactated Food aided every much in keeping up her body heat."

NORTH CAROLINA
MEDICAL JOURNAL.

THOMAS F. WOOD, M. D.,
GEO. GILLETT THOMAS, M. D., } Editors.

Number 6. Wilmington, December, 1887. Vol. 20.

ORIGINAL COMMUNICATIONS.

INCISION INTO THE PELVIS OF KIDNEY, AND TREATMENT TOPICALLY THROUGH DRAINAGE-TUBE, FOR THE CURE OF BRIGHT'S DISEASE—CASE SUCCESSFUL—REMARKS.

By T. B. Wilkerson, M.D.., Young's Cross Roads, Granville County, North Carolina.

Peyton P., æt 30 years, married; a well-to-do farmer of Halifax county, Va., of no traceable hereditary or acquired constitutional taint, consulted me in March, 1886, for some renal trouble. He dated the inception of his malady to a blow from the falling top of a pine tree, the latter striking him, while stooping, on the back in the right lumbar region. This injury was inflicted about one year previous. For more than six months the man had been confined to his bed a helpless invalid; the face presented a marked cachectic pallor, with some tendency to œdema around the eyes. General appearance showed extreme emaciation; appetite bad, the little food taken gave rise to colic pains attended with gaseous eructation; anorexia frequently accompanied with nausea and vomiting; skin devoid of moisture, harsh and dry; constant thirst, with some hectic flush toward evening. Hebetude of mind formed a noted feature in the case, the responses to questions being hesitating in manner, in fact, there was a growing tendency to sopor; anasarca present in the lower limbs. The patient had suffered more or less ever since the reception of the injury with dull aching pain in the right lumbar region extending down the groin to the testicle and along the thigh of the same side. This uneasiness was greatly aggravated during damp, cold weather. Micturition has given some trouble—the calls to void the urine becoming oftener than common, especially during the night. A careful urinalysis by his attending physicians during his confinement had demonstrated the fact that there was a persistent loading of the urine with albumen; that the specific gravity had gradually lowered to 1008, and that pus and blood were present in the fluid. The quantity discharged during the twenty-four hours had fluctuated, but with an increased lessening below the normal measure. Microscopical examination had detected tubular casts and granular matter; urine generally of a dark brownish hue, showing considerable sedimentary deposit when allowed to stand for a short time. A general summary of the symptoms noted in this case, together with the rapid loss of stamina in the patient, notwithstanding the excellent hygienic and therapeutic surroundings that had been afforded him, warranted the belief that he was fast nearing the fatal terminus of Bright's disease, and that the danger signal "coma" was nearly in view. A careful deep palpation on the side over the kidney gave an indistinct fluctuation. The absence of any marked hypertrophy of the heart and of disease in any other of the important organic viscera and the pointing, in the main, of the rational symptoms to the right lumbar region, led me to hope that the disease might exceptionally be unilateral in character. Fully cognizant that a point had been reached in the case where any further medicinal measures would prove futile, I determined to perform the following operation: After having satisfied myself of the existence and non-rudimentary character of the twelfth right rib, the patient was placed on a narrow, firm table, before a good light in the prone position, with a slight inclination to the right side, and fully under the influence of chloroform, March 10th, 1886, assisted by J. H. Tuck, M.D., and some medical students, an incision was made through the skin and superficial fascia, commencing a little below the border of the twelfth right rib, extending downward nearly four inches along the border of the sacro-lumbaris muscle. Then, finding the position of the quadratus-lumborum, the upper border of the latter was carefully brought into view by dissection on the grooved director. Having the lips of the wound held well apart, the deep fascia surrounding the adipose capsule of the kidney was divided; and after separating the little fatty tissue present by gentle manipulation with a covered probang introduced under the lower surface of the kidney, the latter was slightly dislocated laterally. This manœuvre exposed the cyst walls; this being nicked was freely laid open. The extreme tension caused the contained pus in the sac to spurt up nearly a foot. The cyst was slightly mushroom in shape, with the neck toward the pelvis of the kidney. The latter was opened sufficiently to admit the finger, and over a pint of matter was expelled. Two small cysts situated on the upper edge of the hilum renale were broken in two. These contained albuminoid-like fluid. After thoroughly washing out the abscess cavity with a weak solution of permanganate of potash, the true cyst wall was well swathed with a mop dipped in carbolic acid; this was done to destroy the pyrogenic membrane. A short soft rubber drainage-tube was well located in the pelvis of the kidney, and to prevent its displacement a suture was passed through the instrument, then through both lips of the wound, and tied. The wound was closed by suture and adhesive plaster. The cavity was directed to be washed out twice a day with a quarter grain solution of permanganate of potash. The following pill is used by me after every surgical operation:

℞.—Acid carbolic	gule. xij
Pulv. opii	grs. vi
Quinine sulph	grs. xv

♏. Make 12 pills. Dose one 3 times a day.

For forty-eight hours after the operation there was considerable dyspnœa, the patient complaining of a heavy weight resting on the right breast; and but little rise and fall were noticed in the thoracic walls of this side. Until the subsidence of this phenomenon it was feared that probably the pleura had been injured. The drainage-tube was allowed to remain in for three weeks.

Five weeks after the operation the wound had healed, and a marked amelioration of the general symptoms was plainly visible, there being a gradual abatement of the renal trouble. The patient continued to improve, and now, more than eighteen months after, the man is attending to his general business, is daily engaged in manual labor on his farm, has gained his maximum weight in flesh, with no evidence of his former trouble. No trace of albumen remains in the urine; the specific gravity is up to the normal standard; he voids the fluid without pain, and in the usual quantity.

Anasarca and all heart symptoms have long since disappeared, and, in fact, there is every indication that the man has been restored to perfect health.

REMARKS.

The application of the knife for the cure of Bright's disease will be regarded by the medical profession as a pioneer step on the road of surgery; but when all medical treatment has been exhausted and a fatal issue is inevitable by the regular routine of treatment, and where there is a reasonable supposition that a pus sac exists, or that septic material is forming in the kidney, a probatory incision into the pelvis of the organ and through a drainage-tube, the direct topical application of alterative antiseptics, afford a hopeful plan of treatment. Pathological anatomy has demonstrated the fact that in Bright's disease there is going on a dangerous irritative inflammation in the tubuli uriniferi; and resulting from the morbific change there is an effusion of effete material. The collection of this matter in the pelvic depository of the organ, no matter how minute the quantity, as long as it remains, threaten danger from septic decomposition. The absorption of this poisonous sepsis into the general circulation may produce a fatal pyæmic or septicæmic attack. The coma frequently preceding the final issue in this disease is no doubt in many instances due as much or more to this cause than to uræmic poisoning. The time will doubtless come ere long when all diseases will be traced to a germinal beginning, and the "materies morbi" traced to an antero- or heterogenitic cause. It has already been asserted that this disease following scarlet fever is due to the accumulation of scarlatinal bacilli in the kidney; the destruction of these by local treatment might be a great factor gained. It may be stated that where there is a reasonable diagnosis that the disease is unilateral, or, if both organs are affected, the one giving the most prominent symptoms may be entered by a probatory cut, and the other will sustain life while this is undergoing treatment; for the cutting into the pelvis of the kidney does not necessarily suspend its functional action. On the other hand, if benefit accrues, the eliminative and secretory action will be increased. This fact has been demonstrated in operations for pyonephrosis when both kidneys were implicated.' The ante-mortem examination of the kidneys in these cases showed a portion undergoing granular atrophy, and the lower surface dotted with amyloid spots.

PUERPERAL CONVULSIONS.

By L. G. Broughton, M.D., Kenly, Johnston County, N. C.

Sometime ago there appeared in the North Carolina Medical Journal an article on "Puerperal Convulsions." The views of the writer and those of myself somewhat differed, and I began to study more closely the cause and nature of the disease. Since the article first appeared in the Journal I have been unfortunate enough to be called to two cases of puerperal convulsions. My idea for writing this article is not to put forth any originality or to call up an argument, but simply to offer a few hints obtained by a careful study of this trouble. It strikes me that, to the general practitioner of medicine, there can be no subject of more importance, for certainly when a physician is called to treat a woman having fits during labor he is as badly perplexed as under any other circumstances during professional life; he realizes at once that there is staring him in the face one of the gravest maladies with which he has ever come in contact. And well may we as a profession so much dread to answer to its summons, for as a body we know less of its true pathology than of most any other disease the human family is heir to. Great minds have combined to fathom its depths and explore its hidden mysteries, and much has been accomplished, but to-day it remains a subject for many discussions and serious investigations. In my own mind I think we can speak much more positively with regard to its treatment than we can of its cause. There are only a very few things we can say we *positively know* about it. We know we find them just before, just after and during labor, but we cannot go much further, positively speaking. We may find convulsions, of course, during any period of a woman's existence, but they are of an entirely different character and require an entirely different form of treatment. I believe that true puerperal eclampsia is the same, in the main, wherever we find it, and that it has the same cause at all times. Now, then, the great question is, What is the prime cause? I confess, with all others, my inability to give it, and yet I will say that I *believe* that the true cause has long been found, if it could only be agreed upon, which is very necessary in order that a successful plan of treatment might be adopted. According to my own experience and to the views entertained by different authors on the subject, I feel fully satisfied that the trouble is wholly and solely controlled by the nervous system. "An over excitability of the nervous system is the only rational explanation of its cause." Clinical observation, the results of therapeutics, experimental physiology, all go to bear up this testimony. The true cause being in the nervous system, any of the other causes given by different authors may underlie, and, in fact, strengthen, the proximate cause, and tend, no doubt, to excite eclamptic perturbation when the main cause is dormant, but that does not destroy the theory. The nervous system of a woman is at a higher tension during pregnancy than at any other time any way. She suffers more neuralgia, toothache, palpitations, etc., during this period than at any other. King in his work says, in speaking of this trouble: "Nerve irritation may be either centric or peripheric, or both combined, that is, an exalted excitability of the reflex excito-motory instrumentalities as they exist in receptive sensory nerves and surfaces, or in motor or responsive ganglia and the motory nerves themselves." An excitor nerve at a great distance, say in the womb, being impressed, awakens such a change in abnormally polorized motor cerebral or motor spinal centers as to bring on convulsive action. If, therefore, any impression be made upon the nervous system, there will be a corresponding impression made upon its functions, so the greater the impression the greater the disturbance will be. In a case I had about two weeks ago I thought I saw this theory well demonstrated; the woman complained for sometime before her confinement of pains of a darting, lacerating character, running up and down her back, and during this period (while these pains were troubling her) she would have "foolishness" in her head. When the pains in the back would cease this condition of the head would also pass off. She would also be very easily excited by anything that would otherwise not impress her at all, showing every evidence of a highly excited nervous system. Some authors speak of a vitiated condition of the blood as being the cause. This strikes me as being unreasonable, for, although the blood is altered, yet by no means can we say it is vitiated blood. Good blood is furnished both mother and child. She is in a physiological state while pregnant, and not in a pathological one. Suppose we adopt this theory as being correct, what would be our plan of treatment? First, let us see to what this highly irritated condition of the nerves will lead to. What are the results of irritation anywhere and at any time? Following irritation we always have a determination of blood to the part, and the determination is in proportion to the amount of the irritation. Now, then, the part irritated most is the cerebro-spinal nerve, consequently we have a determination of large quantities of blood to the cerebro-spinal system. Now, what should suggest itself to us as a natural remedy? Give morphia to relieve irritation—it seems to be indicated to some extent, but yet I do not think it is in the first stage of this trouble, because, while it would admirably control the irritation, yet it would so paralyze the muscular coat of the arteries, etc., as to let the blood remain in the cerebro-spinal system as before. Blood-letting here is *the* remedy to overcome the congested condition, and *afterwards* morphia, to overcome irritation. Bleeding is a good sedative any way. Who has not seen the pain of pneumonia relieved by the loss of a little blood? This is my universal plan of treatment—first bleed, then morphia, and *many*, many times no morphia has to be given at all, and as long as the lancet continues to serve so well I do not want a better plan. It beats all the chloral, and bromide, and atropia, and chloroform, etc Formerly I dreaded these cases, but now, since I practice in this way, I do not.

I might mention other things—manner, dealing, etc., etc., but of no use, for all understand them.

Cinquefoil (Potentilla Canadensis) in Night Sweats.—Dr. Sampson Pope, of Newberry, S. C., calls attention of the profession (*Therapeutic Gazette*) to the use of Potentilla Canadensis (Five finger, Cinquefoil) to relieve night sweats. It is given *ad libitum* in form of decoction. "Five finger" is very common in all parts of North Carolina.

NOTES ON GYNÆCOLOGY—DISPLACEMENTS OF THE UTERUS.

By R. A. Patterson, M.D., Aurelian Springs, N. C.

Perhaps no more common, and few more important, lesions befall the female genital organs than displacements of the uterus, and perhaps in no direction has surgery achieved greater success than in restoring the organ to its normal position, and health and comfort to the afflicted.

Not only do the most accredited gynæcologists attribute to displacements, dysmenorrhœa, sterility and many functional derangements of different organs and prove their diagnosis correct by restoring the uterus to its natural position, and so relieving the patient, but the successful management of such cases is a frequent event with the general practitioner. Yet, strange to observe, that there are not wanting individuals who deny that evidence can be adduced to prove that any derangement of the uterine functions are due to these causes.

The editor of the *London Medical Gazette* quotes some statistics from a Dr. Vedeler, of Christiania, and says if these statistics are admitted to be true, displacements are as common in the healthy as in the sick.

This Dr. Vedeler claims to have examined 3,012 women, irrespective of health or disease, and a large proportion of them virgins in perfect health. Now, if the state of morals in this town is such as to admit of his being allowed to examine so many females in a state of health for the gratification of curiosity, is the place worthy of its name? It is to be hoped that the statement is a fabrication, and that no such multitude of healthy women in any civilized land ever consented to submit themselves to such degradation, and his professed discoveries are the more improbable from the fact that, so far as the experience of the most distinguished gynæcologists extends, his statements are diametrically opposite to the facts.

This London editor must have very little respect for the teachings of his distinguished countrymen, Simpson, Grailey Hewitt and others, to endeavor to sustain or corroborate the statements of this apparently unscrupulous foreigner.

In a paper read at the late International Congress by Dr. A. Lapthorn Smith, he says that nearly all diseases are due to muscular relaxation. The uterus being a muscular organ, and supported by muscular ligaments, a relaxation of their fibres brings about displacement. His remedy for the relaxation is electricity, but it is doubtful if, in the case of a woman who is compelled to be much on her feet and to exert herself greatly doing household work, any remedy has ever been devised which sustains the womb in its normal position and affords so much comfort as a well-adjusted pessary. The efficacy of the instrument is exemplified in the cases cited below which are selected from my own practice :

Case 1.—In March, 1884, I was called to see Mrs. J. W. P., aged about 30, the mother of two children. Had been in poor health since birth of last child, 12 months old, sometimes unable to exert herself at all, but for the past two months confined to bed, unable to sit up except for a few minutes in bed. General appearance indicated fair health except somewhat anæmic. Suffered pains in pelvic region and lower extremities. Manual examination revealed prolapsus uteri, os resting on floor of pelvis. Happened to have with me Thomas Hodges' pessary, upon the application of which she was able immediately to walk without pain or difficulty. Having been unable to sit on anything but the soft bed before, she could now sit, without inconvenience, on a hard bench. Being requested to walk in the next room, where were assembled the family, she replied, "They will take me for a ghost, knowing I have not walked for two months;" and when she entered the burst of astonishment on all sides showed that she was not far wrong. After this she was able to attend to her domestic duties in and out of the house, and became pregnant. After the birth of the child she was affected in a similar manner, and is again relieved by Hoffman's soft rubber pelvic pessary.

Case 2.—Mrs. P. L., aged about 26, with one child 3 years old; had aborted 9 months before; health very poor, pale, anæmic, pains in abdominal region, and lower extremities. Leuchorrhœa, incapacitated for any work, such as the washing, cooking, etc., for herself, husband and child, devolved on her, and was especially onerous. Found womb prolapsed and anteverted; granular inflammation of os and cervix. Applied to inflamed parts fluid extract pinus canadensis ℥ i, carbolic acid gr. 10, a few applications of which, with perfect rest, removed the inflammation. The womb was replaced, and Hoffman's pessary applied. She was given elixir calisaya, iron and strychnia as a tonic. She soon recovered, went about her usual work and has since borne a child.

Case 3.—Mrs. J. H. B., aged 30, married 14 years, applied to me, stating that she suffered indescribable pain, at her monthly periods violent headache, occasionally had spasms and was insensible, suffered greatly during and after defecation, health much impaired, pale and emaciated, multiparous. Examination revealed womb rather attenuated, retroplexed, causing stenosis at internal os, giving rise to difficulty and pain in passing the sound, which entered with a sudden issue. One ovary prolapsed. The retroflexion was easily overcome, but pessaries of various forms and designs were used to retain it in the normal shape. The stenosis was greatly modified by the introduction of bougies and sponge tents. The treatment enabled her to pass those periods sometimes painlessly, and at others with little, so that her health and general appearance greatly improved, and she was entirely relieved of those grave symptoms.

Case 4.—Mrs. J. K., aged about 35, mantaumaker, had borne several children, youngest seven years of age, since birth of which had been in wretched health, unable to walk from room to room without suffering intensely; pale, feeble, anæmic, painful sensations in different regions. Had been treated by different practitioners, but never examined. Found uterus prolapsed and anteverted. Applied Hoffman's pessary and gave iron tonic. Her appetite, which had become "bad," was restored, her flesh and color returned, she walks two miles without inconvenience, and is, in short, quite well.

Case 5.—Mrs. K. H., aged about 35, married 17 years. Aborted a few months after marriage, never been pregnant since, troubles dated from time of abortion. Complained of painful sensations in pelvic region and back, walking caused great discomfort and weariness (dyskinesia), insomnia and dyspepsia, but the most constant and serious pain was in the right supra-iliac region. Digital examination revealed prolapse of the uterus, the os resting on floor of pelvis, fundus leaning to left side. Speculum disclosed no abrasion or ulceration of os. Sound entered two inches without the slightest obstruction or pain. Her appearance indicated good health as to amount of flesh, color, etc., but she remarked that no one knew the amount of her sufferings.

Attributing her troubles to the displacement, the uterus was replaced upon the end of the finger without causing pain. A tampon of cotton wool, saturated with fluid extract Pinus Canadensis was placed against the os, and one without the extract behind this. Saw her in two days, when she expressed much relief, slept well, walked with greatly more ease, but pain in right side remained the same. Learned from friends that this pain, though constantly with her, was greatly aggravated at times, and was called by them colic. Removed tampon, had vagina thoroughly syringed with hot water, then applied one of Hoffman's soft rubber pessaries No. 1. Returning after several days, found pessary had not maintained its position well, removed it and adjusted No. 2. About ten days afterwards was summoned to see my patient, said to be suffering great pain. The thought at once occurred that the pessary is causing irritation in the pelvic region. On reaching bedside found her suffering great pain in right supra-iliac, extending towards umbilicus, proceeded to remove pessary, but was told by patient that it was causing her no inconvenience, but had afforded her great relief. On removing it found no tenderness or swelling in or near the uterus and nowhere in pelvic region the os and cervix could be pushed to either side without causing the least pain, but when the uterus was forced up there was tenderness. There was every symptom of acute peritonitis. At first, attributing all the symptoms to the displacement, the right supra-iliac had never been examined with a view of discovering any cause for the pain, and now the excessive tenderness forbade it. Upon reflection it did not seem possible in the absence of all pain or tenderness of any organ in the pelvic region that the inflammation could in any way be connected with the instrument. Its commencement seemed to be in the seat of the old trouble, the region of the cœcum. Whether typhilitis, with ulcerative perforation, abscess or cancer discharging into the peritoneal cavity, or something else, is unknown.

Death resulted in four days. But for the fact that the pain originated so high up, nearly on a line with the umbilicus, in what seemed to be the seat of an old lesion of doubtful nature, the question might arise, Can a pessary produce peritonitis without giving rise to any symptoms, either objective or subjective, of local malady?

COMPARISON BETWEEN THE SURGICAL DISEASES OF THE WHITE AND COLORED RACES.

By Louis McLane Tiffany, M.D., Professor of Surgery in the University of Maryland.

The following notes are brought to the attention of the Association as preliminary to a more extended series of observations not yet completed.

While the number of cases collected is too limited to admit of the formulating of rules for a comparison between surgical affections of the white and colored races, yet it will suggest lines of thought for future research.

The statistics presented are prepared from a record extending over a period of thirty-four months, embracing 4,930 surgical cases, the great majority being out-door patients of a general hospital, the minority occupying beds in the wards of the same hospital; so far as possible, all patients were studied under similar conditions. Of the 4,930, 64 per cent. were whites, and 36 per cent. were negroes. Under this latter heading are classed mulattoes of various shades. Not the least interesting observation that I have made is, that where whites and black negroes differ in their behavior under a disease, mulattoes are apt to occupy a middle position, corresponding, more or less, to their gradation of color. The diseases of the two races will be compared in percentages, and it is necessary to remember the proportion already stated which the whites bore to negroes—64 : 36, or nearly two to one.

	Whites.	Negroes.
Abscess occurred in.........	57 per cent.	43 per cent.

the negro slightly exceeding his proper percentage; when, however, abscess by region is studied, a marked difference is found.

	Whites.	Negroes.
Abscess of neck and axilla...	44 per cent.	56 per cent.
Abscess of hand and fingers..	75 "	25 "
Alveolar abscess............	45 "	55 "

Alveolar abscess was observed very rarely in the dark negro, but frequently in the light mulatto.

The neck and axillary abscesses were often observed in association with enlarged lymphatic glands in

	Whites.	Negroes.
Neck Axilla Groin	41 per cent.	59 per cent.

Excessive pus formation occurs in the negro, not only with scrofulous affections, but with syphilitic as well; enlargements of lymphatic glands also are apt to be marked in the syphilitic negro, compared with the white race. My experience leads me decidedly to the opinion that suppuration in the syphilitic negro is greater than in the syphilitic white.

The following table indicates the relative frequency of the diseases named :

	Whites.	Negroes.
Ganglion	83 per cent.	17 per cent.
Bursa	77 "	23 "
Hydrocele	94 "	6 "
Fistula in ano	71 "	29 "

In the negro this latter has rarely been noted, unless accompanied by indications of tuberculosis.

	Whites.	Negroes.
Internal hemorrhoids	82 per cent.	18 per cent.

It is not at all uncommon for "piles" to be complained of by negroes, who are apt to designate all rectal and anal discomforts by this name. Examination, however, often reveals another pathological condition; the above percentages are accurate.

	Whites.	Negroes.
Spinal caries	47 per cent.	53 per cent.

has been seen in the lower dorsal region of the negro more often than elsewhere. Recovery from caries of the spine is more frequent among whites. An adult or middle-aged negro showing the characteristic humpback of cured Pott's disease is a great rarity.

Dislocations have been encountered more often in the whites, and taking the shoulder as a standard, the proportion is found to be—white, 82 per cent. ; negro, 18 per cent. Fractures do not show a difference between the races.

Keloid is very common among negroes, and rare among whites. Its occurrence without wound is a matter about which I have been able to reach no conclusion, since a traumatism so slight as to have been forgotten, may be the starting-point. In at least one instance (negro) within my personal knowledge, a keloid formed at the seat of an injury, the skin not having been broken. The tendency to keloid growths is most pronounced in early life, less so in adult, while it is highly probable that middle and old age are accompanied by a tendency on the part of the formations in question to cease growing and atrophy. Hence, an aged negro with keloid is exceptionally seen. Retrograde metamorphosis is characterized by the surface becoming soft and wrinkled, resembling somewhat the pendulous tumor of fibroma molluscum. Removal of keloid in early life is to be deprecated, speedy recurrence being inevitable; when the period of rapid growth has passed an operation can be undertaken with the prospect of relieving the patient from a present discomfort, and the expectation of a limited recurrence, if at all. Of benign tumors, lipoma and fibroma are recorded as met with more often in the colored race; sebaceous cysts occur largely in whites—88 per cent. Telangiectatic formations are extremely rare among negroes; their non-recognition may be due in some instances to their being obscured by skin pigment, in the same way that an erythema or commencing erysipelas may escape notice, but this will not hold good for the tuberous nævi so common in white children.

Of malignant growths, the ones most common in the negro are the sarcomata, and these are usually in relation with the skeleton (osteo-sarcoma). Carcinoma is very rare in the negro. A most interesting observation in this relation is that there is not recorded a single instance of epithelioma of the face or lip of a negro. My practice, other than here tabulated, shows similar experience. On one occasion only can I recall to mind an instance of epithelioma of the tongue of a negro.

Acute inflammatory gonorrhœa is recorded as more frequent in whites, while the reverse is true of chronic urethral discharge, negroes not paying much attention to such a trifling ailment. Gonorrhœal rheumatism is infrequent in the colored race.

Inflammatory phimosis, usually from local sores (chancroidal) occurred in the proportion of white—27 per cent.; negro, 73 per cent. The sores are very often situated just inside the preputial orifice.

Lateral curvature of the spine is very rare in the negro; on the other hand, rickets, with more or less bone deformity, occurs—white, 37 per cent.; negro, 63 per cent. Congenital deformities are very exceptionally seen in the colored race, and, if present, the possessor will probably be a light mulatto.

Cleft palate, harelip, talipes (non-paralytic), exstrophy of bladder, epispadias, hyspospadias, spina bifida, have not been met with in the dark negro.

One instance of spina fidia, one instance of harelip, and two instances of congenital club-foot have been met with in negroes having a very large admixture of white blood.

Comparison made between ward patients of the two races, some admitted into hospital when first seen, others treated as out-patients, and sent into hospital for operation, have led me largely to form the opinions expressed in suggestions 1 and 2, hereunto appended.

In conclusion, I offer the following suggestions:

1. Surgical affections pursue different courses in the white and colored races under identical hygienic surroundings.
2. Surgical injuries and operations are better borne by negroes than whites.
3. Surgical diseases involving the lymphatic system, especially if tubercular, are more fatal in negroes than in whites.
4. Congenital deformities are more rare in negroes than in whites.
5. Surgical differences observed between whites and negroes are due to race peculiarities.

◆

INFANTILE CONSTIPATION.—A very successful remedy for this is podophyllin in small doses; iridin may be combined with it with good effect. Make a tincture of the following: Podophyll. resin, 8 grs.; iridin, 5 grs.; spt. ammon. arom., 1 drachm. Digest for several days and filter. From 1 to 2 drops of this may be given at bedtime on a small piece of loaf-sugar, or the dose may be combined in mixture along with syrup of orange. This is the dose for a child of one year and under.—*N. Y. Medical Record.*

SELECTED PAPERS.

MALARIA NO POSITIVE POISON, BUT A NEGATIVELY POISONOUS CONDITION.

By C. A. F. Lindorme, Ph.D., M.D., Fort Reed, Florida.

A well-known text-book states, with reference to malaria, that "of the existence of such a poison there can be no doubt." This, I hold, instead of being an axiom, is rather, as the French call it, a *façon de parler*, a term used in cases where it becomes necessary to silence a doubt. It would be strange, indeed, if, by speculative pathology, we should establish the existence of a body of which chemistry is ignorant. Chemical science is far from being loath to tolerate, in atomic hypothesis, the liberal exercise of synthetic as well as analytic boldness. But no chemist has as yet dared to conclude from any experiment, or combination of thought based thereon, the existence of a substance called "malaria;" and medical literature even, by the shyness with which its more exact branches dwell upon it, testifies to the problematic character of this diagnostic entity.

The most prominent among the pathological facts connected with malaria is the intermittence of the ailment which is attributed to it. But this is the very point which speaks against the existence of a positively poisonous substance. If a specific poison should be assumed there would be nothing to support the claim why it acts in a way altogether different from other poisons, be they vegetable, mineral or bacteriological, which have a climax of action, proceeding subsequently to either death or recovery, or, perhaps, a continuous chronic ailment. It is bold logic to contend, without any bodily footing for such an opinion, that there is a specific poison which takes its turns in being poisonous, leaving things intermittently *in statu quo ante*.

The text-books, although positive of the existence of the malarial poison, nevertheless admit the doubtfulness of its nature, and are very indistinct in their etiology. While they state that organic dangers mostly occur in the liver and spleen, they leave it an open question whether the pretended poison is chiefly inhaled by the lungs, taken up by the stomach, or, possibly, by the skin !

It would be rather punctilious in the poison malaria if the inlet selected for the perpetration of its mischievous tricks in the body were by other channels than those named ! The assertion that the cause of the so-called malarial diseases may be found in emanations from disintegrating organic matter, vegetative, or, what is worse, animal, is largely supported by pathological observation and therapeutical experience. It seems to exclude all skepticism as to its general authenticity. In attempting to substantiate the hypothesis which is offered in the title of this article, we need hesitate the less to make it our starting-point, because it is precisely the foregoing fact which speaks in favor of our statement that malaria is not a positive specific poison, but a negatively poisonous condition.

The notable chemical substance which is prominent in miasmatic emanations is methane (CH_4), or marsh gas. This is, strictly speaking, no poison. Neither is it a dietetic substance. An emanation which is positively poisonous is carbonic oxide (CO). But this occurs in such minute quantities that we are scarcely justified in tracing pathological complications to it. The particular circumstances, however, under which, as chemistry teaches, miasmatic emanations occur, substantiate the deleterious influence exerted by carbonic oxide, and, it may be, of marsh gas, or some other less known secondary substance. These circumstances are the very ones which our text-books describe as existing in malarial districts; swamps and alluvial bottom lands are the prototypes. Pathology contented itself with the simple statement—chemical investigation laid bare the cause of the said condition—it is a *comparative absence of oxygen*, which leads to putrid fermentation, and later to the formation of the noxious compounds. It is not this circumstance in itself which refers to the pathological point. The carbonic oxide is in too trifling a quantity, the marsh gas too inoffensive for either to exert an absolute influence on the etiology of malaria through the respiratory tract. The fact mentioned is more an agricultural than a biological one. But the further atmospherical condition linked to it is what speaks in favor of our hypothesis.

The text-books state one of the essential conditions for the operation of the presumptive poison, malaria, is the stirring of the ground in turning up the subsoil in the early cultivation of land, digging canals, building railways, and so forth. It is a chemical fact that carbon and hydrogen, the principal elementary constiuents of miasmatic emanations have an affinity for oxygen, and *vice versa*, as in case of the stirring of the soil, sufficient to materially alter the even balance of the atmosphere in the hygienic proportion of its component gases. In consequence, a deficiency of oxygen will ensue, which, absolutely trifling though it be, by giving room to the atomicity of the carbonic oxide, and, possibly, even the marsh gas will realize its relative importance, and produce the peculiar pathological condition which the text-books describe as malarial poisoning. This explains, among other pertinent facts, the observation made and referred to in the text-books that, first, a higher stratum of air is comparatively free from malaria; second, in the more advanced stage of cultivation the malarial influence ceases. It is closest to the ground where the absorption of oxygen by the carbon and hydrogen set free is overwhelming. On the other hand, the progress of oxidation by the cultivation of the land must put a stop to the formation of either CO or CH^4; the unhealthy putrid oxidation is transformed into wholesome *eremacausis.*

The carbonic oxide poisoning in malaria is, as a matter of course, a chronic one. But its conditions correspond with those of acute cases, inasmuch as in these an excess of free oxygen renders the poison innocuous, so that it is more the absence of oxygen than the presence of carbonic oxide which must be called the cause of the disease. The difference between the chronic malarial poisoning and an acute poisoning by, e. g., the emanation from a coal-fire or gas-pipe, is sufficiently explained by the difference in the acting quantity, which in acute cases may be very considerable, and in cases of malaria in a given space of time analytically hardly perceptible.

The pathological lesions caused correspond with this difference in the effectiveness of the poisonous influence. In acute cases the deprivation of oxygen is so considerable that it is in the lungs where the mischief is being perpetrated; the pathological lesion in acute cases of deprivation of oxygen is almost a mechanical one—a mere choking. In the chronic form of malarial poisoning the pathological lesion is one of protracted influence, and the organs exposed to it are naturally those which constitutionally, or by way of their organic function, resent most a deficiency of oxygen. These organs are the liver, and, above all, the spleen.

The intermittent character of the malarial diseases, which the assumption of a specific poison leaves altogether unexplained, yields readily to demonstrative etiology if viewed by our theory. There is in the spleen a "functional intermittent turgescence," which is clearly related to the ingestion of food, and connected with the manufacture of white corpuscles and destruction of red corpuscles of the blood," and points as forcibly to the constitutional craving of the spleen for an excess of oxygen as to a deficiency of this indispensable ingredient in the case of morbid enlargement, especially the so-called ague-cake in prolonged breakbone fever.

This periodic turgescence explains also the action of quinine, its often surprisingly prompt effect, and still more frequent failure. Quinine causes contraction of the spleen. Its action there is like that of an astringent in the stomach, administered to cure a diarrhœa. If somehow or other nature is sufficiently strong, or the conditions under which the case of malaria occurs sufficiently favorable to supply ulterior healing influences, independent of medical interference, the doses of quinine given may "do it;" while in so-called pernicious cases no doses of quinine, short of killing ones, will, by their mere mechanical influence upon the spleen, stop the fever, let alone restore the spleen to healthy organic function.

The avidity with which oxygen is taken up by the soil is shown by the experiments of Joussingault and Lewy, according to which the sandy subsoil of a forest, fourteen inches deep, contained per acre fourteen cubic feet of carbonic acid, while a sandy soil, ten days after manuring and three days of rain, contained 1144 cubic feet, and a vegetable mould compost in the same proportion 772 cubic feet. The air of the atmosphere, on the other hand, measured to the height of fourteen inches over one acre, contained only fourteen cubic feet of carbonic acid.

Now, then, when, during such speedy clearing, as is undertaken in case of proposed tillage, the oxygen of the air is suddenly given access to a virgin soil that is teeming with oxidizable matter, is it not obvious that the oxygen, forced onward by its affinity, will rush into the turned-up carbon; and the air in its immediate neighborhood, viz: in the lower strata of the atmosphere, be deprived of the gaseous equipoise which constitutes the base of what we call hygienic surroundings, or residential conditions of health?

Individual circumstances connected with the malarial poisoning *in thesi* are in agreement with this theory. When it is said that marshy districts, which are overflowed with water, do not develop the poison malaria, and that sudden abundance of water by heavy rains stops its influence, this cannot be explained by assuming a specific substance "malaria." Such an explanation has been tried. It has been said "because the water absorbs the poison." But this, in conjunction with the statement that malaria is very apt to occur "along the banks of tropical rivers" is rather a queer statement. If the water of a pool absorbs the pretended poison, why does not the water of a running stream do it too? On the other hand, when we bear in mind that complete submergence effectually prevents a contact of the vegetable matter with the oxygen of the air, the natural consequence is, that the latter is restored to the hygienic proportions of its constituents, and in consequence deprived of its poisonous character. Even if the presence of carbonic oxide persisted, it would be inert on account of its trifling quantity in the excess of oxygen.

Again, our text-books say that the malarial poison is not formed if the atmosphere is dry, while malarial complaints "are particularly liable to occur after long-continued dry and hot weather, followed by warm rains." This cannot be satisfactorily explained by the assumption of a specific poison. It is at least somewhat doctrinary to teach that the poison, which cannot get out of the ground when it is covered with water, must also remain inert in case of drought; on the other hand, it is readily explained by the oxygen theory. It is a chemically notorious fact that the effect of oxygen on vegetable matter is conditioned by the presence of warmth and water. A rapid oxygenation, especially, will not take place without it; therefore protracted drought leaves the gaseous proportion of the atmosphere undisturbed. Artificial heat, it is said, destroys malaria. This would indicate a very frail condition of the latter as a specific poison, scarcely harmonizing with its ulterior persistency. But our theory notes this circumstance as a matter of course. Artificial heat in its physical effect is the equivalent of a protracted drought; it dries up, and thereby puts a stop to the oxygenation.

"Certain trees are said to exert an especially protective influence, particularly the *eucalyptus globulus.*" Roberts, who mentions this, adds, "but this is more than doubtful," and from the standpoint of a specific poison, malaria, it could scarcely be made plausible. Accepting the oxygen theory, however, the protective influence of *eucalyptus globulus* is easily explained. This tree has a very rich foliage, and exhales a constantly greater amount of oxygen gas than other trees. And as it is a lack of oxygen which causes the distress in malarial districts, *eucalyptus globulus* is one of the most welcome trees which could be cultivated. Moreover, it thrives in low, warm situations, probably on account of its greediness for carbonic acid, CO_2. This corresponds with the observation that trees in large numbers afford protection; for with them, collectively, the same circumstance, i. e., dense foliage exists. And it is stated, at the same time, that trees in large numbers seem sometimes to be injurious; this is probably due to secondary circumstances; probably favoring too great an accumulation of carbonic acid by leaf-mould, etc.

Again, it is said that "morning and evening dews augment the danger from malaria materially," and the reason given is, "probably from condensation of the poison." But this explanation savors somewhat of an exaggerated sense of idiopathic pathological independence, for in physical science it is simply enormous to assume that a poison be condensed by mixing it with water. Even if a condensation were to take place as dew is tranformed from vapor, the alleged reason could not be that of an exacerbation of the topical condition, because, in that case, the air would become purified, and not the poison intensified. On the other hand, an explanation by the oxygen theory is all but convincing. An exhalation of oxygen by the plants never takes place in the absence of solar light. Consequently the poisonous influences exerted in a malarial district from over-abundance of oxidizable matter are more active at night than in the daytime; and if the morning and evening hours prove most dangerous, it must be remembered that they, in all diseases, are the more momentous periods of the day, and this from causes which are beyond the range of our present topic.

The specific poison theory of malaria does not attempt to explain why the toxic effect is so much less in winter. The oxygen theory explains this readily. In the first instance it is the decrease of decay in consequence of the reduced temperature; but a special cause must be found in the circumstances "that atmospheric ozone is most abundant in winter." A deficiency of oxygen is, accordingly, acted against in a two-fold manner.

Last, not least, it is stated that over-feeding, especially meat diet and intemperance, predisposes to malaria. This does not agree with the specific poison theory; for alcohol is a favorite antidote in cases of poisoning; but it agrees perfectly with the oxygen theory. The more ingesta of nitrogen (meat) and carbon (alcohol) in a human body, the more its systemic circulation requires oxygenation, the more readily it is poisoned by a deficiency of oxygen, and in consequence made liable to splenic and hepatic disorders. These, in their turn, lead to accessory ailments, anæmia, etc., in a succession which in no way could be explained by the specific poison theory, but which bears out all the more the hypothesis propounded in this article.

A theory, in order to be able to stand, must be one that will satisfy all scientific requirements. This is the test of therapeutics. I know that it is rather difficult to apply. There is, as yet, very little that is objective in therapeutics. Oxygen is a remedy the value of which depends greatly upon its mode of administration. Its curative effect is not in the dosage, but in the persistency of its application. It is in this those fail whose minds are too much imbued with the specific poison supposition. But practice will correct itself here, as it will in many other cases. The number of those who are dissatisfied with the old method is rapidly increasing. May our exposition serve to induce them to apply the test of a reformed treatment.—*Medical Register.*

A NEW DEPARTURE IN THE DIAGNOSIS OF HEART MURMURS.

By W. Whitla, M.D., Physician to the Belfast Royal Hospital; Consulting Physician to the Ulster Hospital for Women and Children, etc.

It is needless to occupy space by enumerating evidences of the uncertainties and difficulties surrounding the diagnosis of cardiac murmurs. If proofs were demanded, one has only to refer to the recent revival of the battle of Presystolic vs. Systolic Murmurs, waged with rare ability in the Medical Society of London, and by Professor

Gairdner and Dr. Dickinson elsewhere. The object of the present contribution is to point out the cause of the difficulties, and to suggest a method by which they can be, to some extent, overcome.

The site of maximum intensity, direction of conduction, and quality of the *bruit* (each of importance and value) may be omitted from our present consideration, the question of rhythm only falling under the scope of this paper. Given an ordinary case of valvular lesion, where, say, one murmur is heard about the region of the apex; the physician or student attempts to determine the relation of this murmur to the systole or first sound of the heart. If a normal first sound be present, there may be little difficulty; but very often the systolic sound cannot be discriminated from the second; it may be absent and its place taken by the murmur, or both sounds may be so altered that the ear fails to distinguish which of the three sounds is the murmur. One need not dwell upon the many possible combinations of sounds, *bruits* and pauses to show that often much difficulty exists in coming to a confident decision by the aid of the stethoscope alone, about whether the murmur precedes, accompanies or follows after the first sound. Anyone having experience in clinical teaching, must often realize how almost hopeless it is to aid the student mind in arriving at a positive conclusion.

Having failed to determine the rhythm of the murmur by "timing" it with the systolic sound of the heart, let us glance at the usual alternative methods employed in making the exact moment in the cardiac cycle at which the murmur comes in. Assuming that the first sound, the apex beat, the carotid pulse, and the systole of the ventricles are practically synchronous, the following procedures are available for timing the murmur:]1) By the finger on the apex beat; (2) by the finger on the carotid pulse; (3) by the eye watching either of these; (4) by feeling the stethoscope pressed against the ear by the cardiac impulse; (5) by the differential stethoscope.

(There are still other ways in which one may gain some help, such as contrasting the single elements of which the first sound is composed by listening over the tricuspid area, and accustoming the ear to their *timbre;* but this can be better done by the differential stethoscope, and need not be considered.)

By briefly examining these five methods, serious difficulties, fallacies and objections will be found to attach to each.

1. With the ear directly over the murmur and the finger on the

apex, a distinct loss of time or delay is produced by the transmission of the tactile impression to the sensorium, the vibration having to travel over considerably more than one mètre, whilst the route of the acoustic impression is very short. This objection also tells against the second method. This fractional delay may not, on rigid physiological examination, be found to be a fatal objection. The following objection I believe to be fatal not only to the first, but to the second, third and fourth methods—namely, the impracticability of contrasting rapidly the results of impressions received by the mind through entirely different sets of nerves at the same moment. By such practice a clever observer may ultimately be able to confidently satisfy himself that the impulse received by the tip of his finger and conducted along the nerves of his upper extremity *via* the spinal cord and medulla reaches his sensorium, say, one-twentieth of a second before or after his auditory nerve registers a totally distinct sort of impression through the stethoscope. One must say that, after repeatedly testing this experiment with numbers of intelligent students, the only conclusion to be arrived at is that few men probably ever attain to this point of perfection in diagnosis. I am quite satisfied by experience, without being tempted into the fascinating regions of psychology for any theories, that some men find the feat an impossibility after long and wearisome trial.

In the third method, by using the binaural stethoscope the physician attempts to contrast the impressions produced through his optic nerves with those produced through his acoustic sense; and though this is not surrounded with difficulty so great as in the former case, nevertheless the source of fallacy is sufficient to render the method of little value. The period at his disposal during which he must come to a conclusion is so very brief that, before he can decide, the wheel has gone round, and another quickly following series of impressions comes up with vexatious rapidity, and blots out or reverses his former conclusion.

By pressing over the apex with the ear on the single stethoscope, the impulse may be felt by the nerves of the pinna and side of the head, while the murmur is heard by the ear. Though the error caused by delay in conduction or transmission is here eliminated, still the more serious difficulty of contrasting the impressions reaching the brain by different senses is again encountered.

In attempting to time a murmur by the differential stethoscope, the previously-mentioned difficulty is not met with; it is, however, unfortunately replaced by another almost as objectionable. Here one bell being placed over the murmur region, and the corresponding ear piece inserted against the meatus, the second bell is moved about till a spot is found at which the pure heart sound is heard by the other ear. The observer has to contrast the different impressions made upon the brain by both auditory nerves at the same instant. Many fail completely in performing this feat. The explanation of the failure opens up a highly interesting glimpse of psychology, but space forbids the digression.

The ease with which a thrill is recognized to be presystolic by simply placing the palm of the hand over the cardiac region and timing it with the apex beat is very suggestive. Two distinct vibrations are rapidly sent to the brain by the same telegraph wire with a very short interval between them, and there is practically no difficulty in most cases in determining which is first. If one had previously tried to determine which was first by feeling the thrill and listening to the first sound, great difficulty would be experienced through the confusion attending the use of the two telegraph wires.

It occurred to me that if the apex beat could be transformed into a short, sharp click produced by some simple mechanism in the inside of a stethoscope, we would then have a standard in this artificial first sound by means of which the ear alone could time adventitious cardiac sounds with ease and precision. Here the same condition of matters would maintain as exists in the timing of a presystolic thrill by the solitary sense of touch. The ear would hear the artificially produced systolic sound, and immediately after it, or before it, or accompanying it, the *bruit* would be easily registered.

Accordingly I had several forms of single stethoscope made in which the apex beat, after striking a tympanum stretched over the mouth of the chest-piece, was made by means of levers to ring out a sharp, clear rap in the interior of the instrument. Such an appliance (differing in no way in appearance from an ordinary stethoscope) when placed over the apex beat kept up a continual series of clicks, each of which corresponded with a cardiac systole or first sound. It is needless to enumerate the various failures in attempting to carry out this simple problem; suffice it to say that the difficulties of perfecting the mechanism appear to be greater than one could at first conceive.

The simplest form of apparatus is one which can be made and fitted inside a piece of silver formed exactly into the shape of an aural speculum, which can be ultimately fixed into the chest-piece of any plain wooden stethoscope. A band of rubber is stretched across the widest part or mouth of the speculum; from the centre of this band a piece of wire extends vertically up towards the narrowest aperture of the speculum, and, after passing through another narrow band of rubber which keeps it in its upright position, the wire has a fine silk thread attached to a minute hook on its end, which pulls a lever wrought by a minute spring. The lever makes a faint tap against a little anvil each time the impulse of the heart is received upon the band of rubber. If the strength of the apex beat is just sufficient to give the requisite amount of force to the lever, all goes well, but an undue amount of pressure applied by the ear of the physician throws the mechanism out of gear, so that one cannot say, in its present form, that its working is at all to be counted upon.

Mr. Brown, of Edenderry, devised for me a most beautiful piece of mechanism, which he fitted into a single stethoscope to carry out the same principle. In this instrument a band of rubber is stretched across the mouth of a rather large stethoscope; a small disc of wood is placed about the centre of the band, to which the end of a fine cord is fastened. This cord passes over a grooved pulley inside the bell of the stethoscope, on which it is kept tight by a spiral spring attached to its other end. The spindle of this pulley works a pair of multiplying levers, the second of which has a small hammer-head on its free end, which strikes on a thin brass tympanum.

The difficulty of adjusting the mechanism to the varying forces of different heart impulses prevents this instrument of being much use, and the friction sound occasionally produced by the coils of spring and lever is a fatal objection. There should be no reasons why a simpler contrivance could not be devised which would be free of these objections, and which would enable the ordinary stethoscope to produce in its interior an artificial systolic sound. I have not been able to devise such.

Fortunately, however, I have recently found that the desired object can be attained in a very much simpler way; indeed, in a way so simple as almost to provoke a smile.

The little contrivance consists of a small saucer-shaped disc of metal, about half an inch in diameter, from the concave surface of which arises a hollow stem of metal, which receives a piece of fine silver wire capable of being retained by the tiny thumb-screw in the socket formed by the hollow stem. The end of the wire is bent at a suitable angle, and tipped with a small bead, or made probe-pointed. The convex side of the disc is warmed, and being tipped with lead plaster, will firmly adhere when pressed against the chest wall over the region of the apex beat of the heart. The motion of the impulse is thus communicated to the wire, which, acting as a lever, can be made to exaggerate each movement in proportion to the length of wire. If now in the vicinity of the apex beat the ordinary stethoscope (single or binaural) be applied, and the wire so adjusted that it taps slightly against the wood of the stethoscope, the ear will hear what may be practically regarded as an artificial standard systolic sound by which murmurs can be timed with ease and accuracy. A little experience will dictate the way in which the wire should be bent or turned so that its tap will regularly fall upon the bell of the stethoscope. The latter should be placed at such a distance that the lever will not strike it at the very beginning of the act of impulse, but just at the instant when the full force of the apex beat has been communicated to the wire. It is easier to use this appliance along with the binaural stethoscope, as the operator can thus have the use of his eyes in adjusting the mechanism. After fixing the disc and wire *in situ* it is advisuble to apply the stethoscope, and listen carefully for a few moments to the heart sounds before bringing the wire in contact with the wood. In this way the intensity and quality of the sounds or murmurs, and the length of the pauses, etc., can be examined and appreciated when, the sharp rap of the wire on the wood being induced, the rhythm will be demonstrated.

This little instrument, which for convenience might be termed a systolometer, may be modified in various ways; thus I have replaced the metallic disc with a minute cup-shaped piece of india-rubber, such as is used for suspending small articles from the polished surfaces of window panes or mirrors. The rubber being pressed firmly against the moistened skin, will adhere like the leather sucker known to every schoolboy, and will remain *in situ* sometimes sufficiently long to allow of examination. It is needless to say that the systolometer can only be used when a distinct impulse is present.

A very satisfactory form of systolometer can be extemporized by attaching a section of a wine or lemonade cork over the apex region, as referred to by Dr. Dickinson in his recent paper, and after securing it in position with strips of adhesive plaster, a piece of bent lemonade wire having been inserted into the cork can be used as a lever to strike the bell of the stethoscope, and mark the moment at which the natural first sound of the heart should be heard.

In a future contribution I hope to be able to give the results of this simple mechanism, applied to the investigation of some doubtful problems concerning the working of the healthy heart and the mechanism of the presystolic murmur. That the principle is correct upon which its usefulness depends there cannot be any doubt, and its application is now suggested with the hope that in the hands of abler observers its form will be improved and perfected, so that to the student, especially, its use may be an advantage.—*British Medical Journal.*

FÆCAL ANÆMIA.

At a recent meeting of the Medical Society of London, Sir Andrew Clark read a notable paper entitled "Observations on the Anæmia or Chlorosis of Girls, occurring more commonly between the Advent of Menstruation and the Consummation of Womanhood." Under this title the *Lancet* publishes the paper, but it more pithily expresses the view that the author took of the affection in the caption "Fæcal Anæmia," which heads its report of the discussion. It is not a particularly new idea that various diseases of the system at large, especially those that simulate the manifestations of certain diatheses, owe their origin and maintenance in great measure to inadequate intestinal action. Anæmia is no exception, and it is safe to say that almost every acute and experienced observer looks upon it as at least decidedly aggravated and protracted by torpor of the intestinal canal. Nevertheless, so far as we are aware, never before has so thorough and convincing a case been made out for the theory of the dependence of anæmia on constipation as in Sir Andrew Clark's paper.

We have not space to give a summary of the argument, but must content ourselves with presenting some of the more practical aspects of the author's conclusions. The crucial test of the theory, he admits, is in the treatment, and he maintains that the treatment which most speedily and effectually cures the disease is that in which, by the use of tonic aperients, full and regularly recurring action of the bowels is produced; that with the suspension of this treatment the disease recurs, to subside again on its resumption; and that no treatment appears to be permanently successful which does not provide means for securing daily relief to the intestinal canal.

In ordinary cases, he would direct the patient to sip a quarter of a pint of cold water on waking in the morning; to take a tepid sponge-bath on rising, drying herself quickly and then being rubbed briskly with towels; to clothe herself warmly and loosely, taking care that there is no constriction of the body or of the limbs. She should have four simple, but liberal meals, daily: Breakfast, between eight and nine, of whole-meal bread and butter, with one or two eggs, some broiled fresh fish, or the wing of a cold chicken or pheasant, and, toward the close of the meal, half a pint of equal parts of milk and tea, not infused longer than five minutes; lunch or dinner, between one and two, af fresh, tenderly dressed meat, bread, potato, some well-boiled green vegetable, and any simple farinaceous pudding or cooked fruit, preferably apple, drinking one glass of Burgundy, clear or in half a tumblerful of water; tea, between four and five, of whole-meal bread and butter, with a cup of equal parts of tea and milk; and dinner or supper, between seven and eight, resembling the midday meal, but smaller in quantity. Nothing is to be taken after this meal, and nothing between meals. The patient should walk at least half an hour twice a day, and as much more as her strength and convenience will allow. She should go to bed about ten o'clock, and at that time the sponging and toweling should be repeated. The bedroom should be cool and well ventilated. The patient should "lead a simple, regular, active, occupied, purposive life," and not notice or distrust herself. This seems to us an excellent regimen in the main, but we would substitute coffee for the tea.

Together with these hygienic instructions, Sir Andrew Clark prescribes an old-fashioned ferruginous cathartic, to be taken twice a day—usually some such acid mixture as one of twenty-four grains of sulphate of iron, six drachms of sulphate of magnesium, a drachm of aromatic sulphuric acid, two drachms of tincture of ginger, and eight ounces of compound infusion of gentian or quassia, one-sixth part of which is to be taken twice a day, at about eleven and six o'clock. Occasionally this causes nausea, dries the skin, and is otherwise ill borne. In such cases he prescribes a mixture which is much the same, save that it contains two drachms of bicarbonate of sodium instead of the aromatic sulphuric acid, together with a drachm of spirit of chloroform. If neither mixture agrees, he orders sulphate of iron in pills, to be taken with the meals, and a saline aperient in the morning. Under this plan of treatment, nine girls out of ten recover their health in from a month to three months, and the recovery is very likely to prove permanent if they are then ordered a pill of aloes, myrrh and iron, to be taken once or twice a week in doses just sufficient to bring about a moderate natural action of the bowels.—*N. Y. Medical Journal.*

HEART TROUBLES IN CONNECTION WITH TYPHOID FEVER.

Of the many complications and sequelæ of typhoid fever, there are few, if any, of greater importance than affections of the heart and blood-vessels. Within the last few years pathological study has shown how common they are, and the profession has been made acquainted with them largely by the teachings of Hayem, Martin, Barié, Osler and others; but our clinical knowledge of the subject has hitherto been very meager. The pathologist could readily explain the sudden deaths that were so common in typhoid fever, even during the period of convalescence, but the clinician did not always foresee the probability of such a termination, and consequently too often failed to take precautions to prevent it. Such being the case, a recent essay by Landouzy and Siredey, the first portion of which has been published in the "Revue de médecine," is particularly opportune. Last year the same authors drew attention to the lesions of the heart and the blood-vessels found in typhoid fever, and since then they have studied the subject from a clinical as well as from a pathological point of view.

The article alluded to gives the results of their observations in fourteen cases. In one case, that of a woman, death took place quite suddenly on the twelfth day of the fever, the patient dying in syncope on sitting up in bed. On the day before her death her pulse was 96, irregular and compressible, and there was a soft systolic murmur. Diffuse sclerosis of the heart and kidneys was found post mortem. In another case, a girl, eighteen years of age, previously healthy, died rather suddenly on the twelfth day of the fever. At the autopsy periarteritis and diffuse myocarditis were found. There had been no clinical evidences of the pathological lesions until an hour or two before the girl's death. In the next case, a man, twenty-three years old, died on the forty-third day of the fever, after having had several intestinal hæmorrhages. The heart-sounds were free up to the very last. There was infiltration of embryonic cellular elements in the walls of the blood-vessels of the viscera, especially the heart and the liver. In another case, cardiac pain and a loud systolic murmur were developed on the tenth day of a moderately mild attack of typhoid fever. After a few days the pain and the murmur gradually grew less intense, and in fifteen days both had entirely disappeared, and the patient made a good recovery. In another case there were signs of mitral insufficiency during the third week, and when the patient left the hospital, convalescent, the murmur had become more intense. In another case the interesting observation was made of the development of a double aortic lesion during a relapse of a mild attack. The patient was slow in recovering, and left the hospital with a loud diastolic murmur. Two other cases were instructive from the fact that, the patients' hearts having been carefully examined from day to day during a rather mild attack, a mitral murmur made its appearance in each case during convalescence, which seemed to be progressing favorably. In three cases the patients were admitted into the hospital for various heart affections, which, on careful investigation, were traced back to attacks of typhoid fever occurring two, five and fifteen years before.

These observations are especially interesting at a time when thoughtful physicians are disposed to question if the routine employment of internal antipyretics in typhoid fever is not doing harm. In the course of a discussion at the New York Academy of Medicine, not long ago, Dr. Loomis made the statement that during his last term of service at Bellevue Hospital he had had a much smaller percentage of fatal cases of typhoid fever than his immediate predecessor—simply, he thought, from his having omitted the use of internal antipyretics. Drugs of this class, as is well known, are nearly all cardiac depressants, and, in the light of our present knowledge, should be used with a very sparing hand. The writer vividly recalls a mild case of typhoid fever in which the persistent administration of acetanilide came near bringing about a fatal result. Lately such a result has been recorded in a German journal; in that instance the dose was small, and had been repeated only two or three times.—*N. Y. Medical Journal.*

THE TEXAS COURIER-RECORD.—We doubly welcome this excellent Journal, now under the editorial management of Dr. S. T. Thurston and Dr. H. K. Leake. We have known the senior editor as Doctor, Colonel and Doctor again for many years, and if ability at the bedside, in the trying scenes of country practice, or bravery and military sagacity in the peril of battle, at the head of the best North Carolina regiment, or in the cultivation of scientific medicine in the "piping times of peace," are tokens of ability, Dr. Thurston has them. The *Courier-Record* is greatly improved in appearance, and we wish for it literary and financial success.

YELLOW FEVER CURE BY A LAYMAN.—Henry Sack, who claims great experience in yellow-fever treatment, communicates to the Savannah *News* a cure of which the following is the gist:

"The treatment is simple as it can be. Cause an upward tendency of your or the patient's bowels, which will cause the gas to escape or move, and remove the coating of the tongue, and put the body into a free perspiration. The symptoms will disappear in less than an hour. It may be necessary to roll the body in a horizontal position to allow a change in the position of the bowels. Any method the patient may prefer will do, to show the patient he is not sick at all. To prove my theory correct, I am ready for any experimant on myself personally. HENRY SACK."

When this is proven we will have to pay our attention to that other "yerb doctor" who gets a purgative from a certian tree when he peels the bark upward, and an emetic when, from the same tree, he peels it downward, and enquire into the alleged difference between ' low belia" and "high belia."

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN WILMINGTON, N. C.

Thomas F. Wood, M. D., Wilmington, N. C., } Editors.
Geo. Gillett Thomas, M. D., "

☞ *Original communications are solicited from all parts of the country, and especially from the medical profession of* The Carolinas. *Articles requiring illustrations can be promptly supplied by previous arrangement with the Editors. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to the* Journal, *by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to* Thomas F. Wood, M. D., *P. O. Drawer* 791, *Wilmington, N. C.*

THE JOURNAL ENDS ITS TENTH YEAR.

Ten years ago the North Carolina Medical Journal was issued with many misgivings on the part of its editors, of their ability, and knowing that there was an expressed opinion on the part of some of the profession, whose judgment we respected, that there was no room for such a publication. It took many years to pass the experimental stage and reach a position when the income was sufficient to cover expenses. It has been no easy task, but its day of experimental existence has ripened into a successful era, for which we are indebted to the growing progress of education in the profession.

Since we took up the editorial pen there has been a marked progress in professional learning in our State, a fact which has attracted the attention of others than our own people. The Board of Medical Examiners has grown and strengthened during this period, and the general compliance with the law by new graduates, and the wise and just administration of the law by the Boards of Examiners, is a matter of especial congratulation. The efforts to elevate the standard of education under the action of the Board has been appreciated by all good citizens.

The State Board of Health begun its feeble existence with the Journal, and has been able to reach a stage of progress which promises very much for the future. The Journal has striven to stimulate the profession in sustaining the efforts of the Board, and while the condition of affairs is far from what it will be some day, there are unmistakable signs of increased interest, which means that physicians and the general public are being better informed about preventive sanitation and may be relied upon for future efforts.

The Journal has taken a just pride in all these matters, and while it does not claim any undue proportion of merit for striving for these objects, its sincere aim has been to throw all of its influence and much of its hard-gained earnings into these prominent institutions of the Medical Society of North Carolina.

We are not unaware of our defects, as the scores of medical publications which visit our office give us abundant knowledge of what others are doing, but our subscription must be largely increased to enable us to furnish as much reading matter as the journals of the larger cities.

No other magazine, of any sort, as far as we know, has had a continuous existence for ten years, in North Carolina, and we take it as an augury that the future support of the medical profession will enable us to do far better in the future.

SUPRA-PUBIC LITHOTOMY.

We have recently had the pleasure of reading a historical sketch of this operation through the kindness of Dr. Charles W. Dulles, its author.

This method for operating for stone is growing in popularity, and

Dr. Dulles thinks that there is danger lest it suffer by being overrated, even as it so long suffered by being underrated. After thirteen years of study and an analysis of 700 cases, he has come to the conclusion that a temperate view of the subject will lead to the conviction that the supra-pubic operation deserves rank above all other methods of lithotomy for stones of large size, and that its applicability to any case should be carefully discussed before deciding to cut through the perineum.

Dr. Dulles has compiled the bibliography of the operation and number of the operations performed.

The facility of operating by the high cut will doubtless lead many hereafter, to adopt it. We have called attention before to Mr. Annandale's method, viz: by seizing the stone in a lithotrite, depressing its handle so that the seized stone can be detected above the symphisis, cutting down on, and removing it. Stone is not common in North Carolina, but we have heard of about sixteen high operations, and the operators have spoken of the simplicity of it, and the excellent resnlts.

While it is exceedingly valuable for calculi too large to remove from the perineum, it is equally so for small calculi in children. A deep perineal section, with its attendant risks of hæmorrhage and permanent fistula, is formidable, more especially when the result is a stone of disappointly trivial size, as the writer has known.

We would like to put on record the cases of supra-pubic lithotomy done in the state, as some of were among the first done in the country.

EASTERN ASYLUM FOR INSANE COLORED PEOPLE.

There have been some changes in the management of this Asylum. Dr. J. B. Roberts, who for years has been Superintendent, has been supplanted. Dr. Roberts entered upon his work with zeal, and studied the details of his new work with the ardor of one who intended to make a life-time work of it. As distasteful as such work appears to most of the profession, he pursued it with scientific vigor, which attracted the admiration of his professional friends. Whatever may be his future, it will be surely enhanced by the professional achievements of this incumbency.

Dr. J. F. Miller, of Goldsborough, has been elected to succeed Dr. Roberts. He is a practitioner of established skill and mature judgment, well known to the people and profession of East Carolina, and especially of Goldsborough, where he has practiced medicine for more than twenty years.

Dr. W. W. Faison, who has held the position of assistant in the Asylum during Dr. Roberts' term, still retains his position to complete his term.

We wish the new management success. Theirs is a difficult task, many alterations and improvements are imperatively demanded to put the establishment on a par with the other asylums in the State, as we learn, and this can only be brought about when the officers are thoroughly familiar with the needs of the establishment, and can succeed in getting a harmonious agreement of the Board of Directors. The Eastern Asylum ought to be advanced now above an experimental stage.

RED-HAW is considered an excellent remedy for uterine hæmorrhage in Russia. A very strong decoction of the bark of the root is given. The plant used there (*British Medical Journal*) is *Cratægus officinalis*, but it is very likely that any of our well-known species would possess the virtues of the plant named.

DR. R. C. MYLES, of Claiborne county, Miss., a distinguished young scientist, who is now practicing in a London hospital, writes to a friend under date of August 8th: "I have had great luck lately in the case of the Crown Prince of Germany. Dr. McKenzie left the invention and construction of the instruments used in the last operation on his throat entirely to me, and I succeeded so splendidly that I was complimented by Dr. McKenzie, and when I was presented to the Prince Dr. McKenzie told him I was a great expert, and was the author of the instruments to be used on his throat. The Prince grasped my hand and was most friendly, and after the operation, which was a complete success, the Prince, after I explained the *modus operandi* of the electrode, said: 'Splendid, excellent,' and was joined by his German physicians in his most emphatic approval."—*Southern Churchman.*

REVIEWS AND BOOK NOTICES.

A Practical Treatise on Materia Medica and Therapeutics. By Roberts Bartholow, M.A., M.D., LL.D., Prof. Materia Medica and Therapeutics and Hygiene in the Jefferson Medical College. Sixth Edition. Revised and Enlarged. New York: D. Appleton & Co., 1887. Pp. 802.

Since 1876 this work has passed through six editions, a degree of favor which is seldom accorded to medical works. The author has always attracted a large number of readers, and this is remarkable, as his work came upon the stage when Stillé's masterly work and that of H. C. Wood were accepted as standard text-books.

This volume differs from the excellent new candidate for favor by Dr. Edes, noticed in this issue, in that it is more complete and full in the presentation of subjects, and that it notices nearly every new remedy.

The spirit of the author is shown in the following extract from the preface: "So numerous and serious are the fallacies of experiment and of clinical experience, that an author whose function it is to record the results, must maintain a judicial attitude, and examine into the pretensions of new remedies with the same jealous care that he defends the older medicaments against the assaults of medical iconoclasts. Much sifting of the material is necessary. Some of the new agents possess the virtues ascribed to them by their enthusiastic promoters; others seem hardly to justify their appearance in the *rôle* of remedy; and not a few, probably, are worthless for any purpose."

The evidences all through the volume shows a thorough alertness for all that is going, even Stenocarpine, "Gleditschine" coming in for a page and a half, as bright and as fresh as though the fraud was not fast on its way to the lumber room, which has opened its capacious doors for many hundreds of others. A delay of a month would have been long enough to have detected the fraud.

The article on coca is thorough, and has much in it that should attract the attentive study of all physicians. He says in one place: "The preparations of coca, especially the wine, are much employed as stomachic tonics. The consumption of wine coca must be enormous, for numerous preparations are on the market." * * * The author has observed that clergymen, and men with scruples and high moral character, take this wine freely, and not without a devout appreciation of its grateful action in time of need. He cites the instance of a clergyman of high character and high attainments, who informed him that he "found that a small wine-glassful of the wine of coca, taken before the morning service, banished fatigue, gave a resonant tone to his voice, and freed his intellect from the trammels of a written discourse, and gave scope and power to his sermon." The profession needs to reiterate this warning of Prof. Bartholow.

We have written in former issues of the journal our appreciation of this volume, and we take this occasion to say that we consider it essential to every well-selected library.

ANATOMY, DESCRIPTIVE AND SURGICAL. By Henry Gray, F.R.S. Drawings by H. V. Carter, M.D. Edited by T. Pickering Pick. A new American, from the Eleventh English Edition, thoroughly Revised and Edited, with additions, by William W. Keen, M.D. To which is added LANDMARKS, MEDICAL AND SURGICAL. By Luther Holden, F.R.C.S., with additions by Wm. W. Keen, M.D. Philadelphia: Lea Brothers & Co., 1887.

The students who plodded through "Pancoast's Wistar," or even who had "Horner," with the after-help of Horner and Smith's Atlas, or even the later addition of "Wilson," will remember with what delight Gray's Anatomy was welcomed. The charm of the new volume to the student was not far to seek. The prime attraction was the superior drawings, each organ labelled in distinct lettering so that the beginner overcame the inconvenience and confusion of going back to plates and referring to side figures to indicate certain organs. This one feature was enough to ensure its popularity, and it was soon adopted to the exclusion of the older text-books, notwithstanding the superior text of Wilson. During the Confederacy, when the Army Medical Boards were searching the qualifications of medical officers, in Richmond and elsewhere, a copy of Gray's Anatomy was worth its weight in silver to the anxious candidate. A few nights of careful study and gazing on the wood-cuts would photograph the names of muscle, artery and nerve in such a way that a candidate would surprise himself at the depth of his knowledge. As a book of ready reference before undertaking an operation, its possession in those troublous days was rare good fortune in the field, and could only be seconded by Bernard and Huette or Stephen Smith's little manual, of which now and then one was fortunate enough to get under flag of truce, or by capture.

As we recall that old edition and compare it with the fine, portly volume before us, we cannot help admiring the vast improvement in text, in illustrations and in its mechanical execution. Old clerical errors and errors of detail have been corrected, and new illustrations have been added until the number has now come to be 1,040.

In this particular edition colors have been used to indicate the attachment of muscles in red, arteries and veins in red and blue respectively, and the nerves in yellow. The color printing is so accurately done that there is no blurring or overrunning of colors, and the colors are so bright and distinct as to catch the eye almost at a glance.

The addition of Holden's Landmark, which has been a feature in several of the later editions, is retained in this, and has been added to by Dr. Keen.

The possession of Gray's Anatomy by the student and physician renders other additions to his library in this line superfluous.

TEXT-BOOK OF THERAPEUTICS AND MATERIA MEDICA. Intended for the Use of Students and Practitioners. By Robert T. Edes, A.B., M.D.. Philadelphia: Lea Brothers & Co., 1887. 8vo. Sheep. Pp. 550.

The aim of the author has been to present "concise, practical, working view of the present state of pharmacology and therapeutics, which shall select for the overburdened student and young practitioner the more important and immediately applicable details which properly find a place in the larger and encyclopœdiac treatises." The author has kept strictly to his text, and has written only of those things which are practical and pretty surely demonstrated or accepted. He has opinions of his own and states them clearly, and as far as we are able to discern, always safely.

The division of the book is after a simple and rational classification, which make it easy of reference; besides there is a useful "Therapeutic" and "General" index, both full and adequate.

Most of the newer remedies have been introduced, which is more to be remarked under the head of *antipyretics*. The author describes more fully Antipyrine and Antifebrin—he puts the dose of the former of from 8 to 30 grains, repeated once or twice at hourly intervals, and of the latter of from 2 to 15 grains; the smaller dose may be repeated in two or three hours. And, speaking of dosage, recalls that the dose of santonin is put at *one-fourth* of a grain to a child, a smaller dose than we remember to have seen suggested, but one which a more intimate knowledge of the dangerous character of the drug fully bears out. This writer for years was in the habit of giving from 3 to 5 grain doses to children, and it was the usual dosage many years back. Of the dosage of digitalis in delirium tremens he says: "Digitalis has been used in very large doses in delirium tremens, and this disease seems to confer a certain immunity from its effects. It should be restricted to cases where it is called for by the condition of the circulation rather than the name of the disease.

The authors's opinion about several new remedies is just and well worthy of confidence. It is surprising how few of the drugs which are lauded so highly when submitted to the judicial mind of a skilled therapeutist are relegated to the clutter-room of the apothecary. In a few words he gives the present status of *Convallaria*: "Convallaria is probably closely akin to digitalis, but passes into the second (toxic) stage less readily and produces less gastric irritation. Like digitalis, it often acts as a diuretic, and in the relief of dropsy, by raising blood tension. It is, on the whole, probably less efficient than digitalis."

We can heartily recommend Edes' Therapeutics for its sound teaching, the simplicity and directness of its language, for its compactness and thorough and judicious statements as to new remedies.

A Complete Hand-Book of Treatment, Arranged as an Alphabetical Index of Diseases to Facilitate Reference, and containing nearly 1,000 Formulæ. By Wm. Aitken, M.D. (Edin.), F.R.S. Edited, with Notes, by A. D. Rockwell, A.M., M.D. New York: E. B. Treat, 771 Broadway, 1887. Pp. 444.

This is one of the medical classics secries, and we can commend it, for it differs materially from some of the scrap-book volumes which have been presented to the public from the hands of nominal editors.

The subjects are arranged alphabetically by diseases, with a sufficient number of cross-references to facilitate search. The selections from other authors are digested and presented with proper emphasis, so that in all the volume we see none of the clap-trap that enters into some works of similar character.

The therapeutics of the volume is sound, and none the less so that many of the new and ephemeral articles, and some still on trial, are not admitted to a place. Yet we think that cocaine has hardly had a fair showing.

Some of the doses given by English physicians are not employed in this country, and, indeed, many of such compounds are not only inelegant, and would cost a physician his practice by their repulsiveness. But the mere construction of the prescription does not at all detract from the soundness of therapeutics involved, except with those physicians that rely without questioning upon the favorite prescriptions of eminent men.

The volume is small and handy, but there is as much condensed in it as a skilful teacher and writer could get in it.

Four Months Among the Surgeons of Europe. By N. Senn, M.D.

Not a few medical men go to Europe for sight-seeing in the great capitals—some really go to study. Some few go well equipped by previous maturity of experience, and seeing the best work done, know how to tell what they see. Dr. Senn belongs to this latter class, and what he saw he has written down for the information of the large majority of us who will never get beyond this country. In truth, we might justly add, that many who expend large sums for the same purpose ostensibly as that performed by Dr. Senn, can get more out of these letters than by actual observation, save their money and avoid sea-sickness.

These letters were written to Dr. Fenger, and came out in *The Journal of the American Medical Association*, and are now reprinted in this desirable form, that they may be leisurely and continuously read. We have never read any descriptions of European surgeons and surgery that were at all comparable to these, and we know of no pleasure in the way of reading that we can recommend to our subscribers that has nearly as much entertainment and instruction.

NOTES.

Raw oysters are diuretic.

Dr. Richard Dillard, an honorary member of the Medical Society of North North Carolina, died at his home in Edenton recently.

The North Carolina Asylum for the Insane at Raleigh has now 292 inmates—the largest number ever before cared for within its walls.

Antifebrin.—Warning notes are sounded on every hand about antifebrin. It is best to note symptoms in patients whose idiosyncrasy is not known.

Spanish needles (*Bidens bipinnata*).—Dr. C. R. Gaul, of Jacksonwald, Pa. (*Therapeutic Gazette*), has had extraordinary success in treating asthma with this weed.

Spirits of turpentine deodorizes *iodoform*, according to *Le Progrés—Therapeutic Gazette.* A little rubbed on the hands, then wash with soap and water. It is almost too good to be true.

The Raleigh Academy of Medicine held a meeting on the 7th of December and elected Dr. J. A. Sexton President, Dr. A. J. Buffalo Secretary, and Dr. P. E. Hines Treasurer.—*News & Observer.*

Antipyrine for Asthma.—Dr. L. J. Graham, of Henderson, Texas, gives some favorable experience (*Daniel's Journal*) in the use of antipyrine in asthma. He gives fifteen grains, to be repeated in an hour.

The *Medical World* has the latest novelty in a map of the tongue on which "localized seats of relationship to the various organs of the body" are definitely marked off in sections. The "discovery" is copyrighted.

Is it not foolhardiness to exhibit leprosy for clinical use, and keep such subjects in the midst of communities just for the purpose of investigation? Leprosy is certainly communicable, and its unfortunate subject should be separated according to the good ancient practice.

IPECACUANHA, for which the world's supply has come chiefly from Brazil, is, after many failures, successfully cultivated in India, but so far on a small scale. Assay showed 1.7 p. c. of emetine in the India root, which is th average of the Brazilian root.

ANTIPYRIN is not only a patented medicine, but there is some reason to believe that adulterated specimens are on the market. Complaints as to its falsification were recently presented to the Therapeutical Society of Paris.—*Medical Record.* [Antifebrin is not patented, is cheaper and gives better satisfaction.—EDS.]

The doctor is a generous man,
But people cheat him when they can;
They have their health restored on trust,
And pay him something when they must,
And swear no bill is bigger than—
The Doctor's!
—*National Druggist—Medical Record.*

COCAINE in the vomiting of pregnancy seems a rational treatment, freely applied to the vaginal roof and cervix, and in some instances inserting a probe covered with cotton saturated with the solution into the cervical canal. Dr. William Duncan, who reports it (*Lancet—Therapentic Gazette*), has had no miscarriages induced by his application, but of course it must be skilfully done.

AN English judge, settling a case in which one quack medicine man was suing the other for using his trade-mark, said, lest either party should be tempted to make the judgment a useful medium for advertising his article, he hoped he would add to the advertisement the following intimation: "No one should use this preparation except under medical advice."—*British Medical Journal.*

DR. JAMES E. REEVES, the distinguished ex-President of the West Virginia Board of Health, is about to remove from Wheeling to Chattanooga for the purpose of establishing himself in practice in the latter city. We trust that the more southerly climate will prove beneficial to him and the partner of his toils, and we congratulate Chattanooga on the accession of such an able physician to the medical faculty.

Cholera Bacillus a Diagnostic Test.—The demonstration recently of Koch's cholera bacillus in the dejecta of a child from an Italian emigrant vessel, demonstrated the disease of the child to be cholera. The bacilli were cultivated at the Carnegie laboratory. Four days were required to allow the bacilli to grow, and the ship was detained until this demonstration was effected. Every physician ought to learn enough of bacteria cultivation to make such a test.

Tincture of iron and chlorate of potassa as an old-fashioned remedy should not be laid aside. Dr. McArthur (*Medical Record*) reminds us that its value has been clinically tested, and that chemically the action of tr. chl. iron on chlorate results in a mixture of chlorine, euchlorine, potassium chloride and ferric chloride. Euchlorine readily splits up into chlorine and nascent hydrogen, which are effective disinfectants and antiseptics. The best way is to add the tinct. chloride to dry chlorate, and then dilute to strength required.

Limit of Sensrtiveness in Taste.—The recent experiments of Fischer and Pouzoldt (Sensitiveness of the Sense of Smell," Liebig's *Annalen der Chemie*, B'd. 239, 131) have led me to search for some record of similar experiments determining the limits of the sense or taste. Finding none, a personal investigation was undertaken in which the following experiments were made: The substances examined were weighed and then dissolved in known volumes of the proper solvent. This solvent was generally water, and water was always used for dilution, so that the taste was not interfered with by the solvent. To eliminate personul error, two persons acted as tasters. In each case one cubic centimeter of the solution was tested. The solutions were diluted to a point at which they barely tasted (in some cases perceptible to only one of the experimenters), and this was taken as the limit.

The results were as follows:

Sugar..................	$\frac{3}{1000}$	of a grain barely tasted.
Salt	$\frac{1}{1000}$	“ “
Tannin	$\frac{2}{10000}$	tasted $\frac{1}{10000}$ failed to taste.
Hydrochloric acid	$\frac{1}{10000}$	of a grain barely tasted.
Saccharin	$\frac{5}{1000000}$	“ “
Strychnine...........	$\frac{5}{10000000}$	“ “

F. P. Venable.

University of North Carolina.

The mortality from labor in China is estimated to be eight per cent, or about 400,000 deaths annually.

The name of Dr. S. D. Thruston, the editor of the *Texas Courier-Record of Medicine,* is incorrectly given on page 360, for which we make this apology.

Quiet communities, as in North Carolina, have little to fear from leprosy, but it is reckless to exhibit leprous patients to curious students and others. Dr. Van Harlingen, of Philadelphia, was fined for not isolating two patients with this fearful disease.

Ehrlich's Test for Typhoid Urine.—1. Sodium nitrite 1 part, aq. destill. 200 parts (is liable to be decomposed after from four to ten days. 2. Acid sulfanilic 5 parts, acid hydrochloric conc. pur. 50 parts, aq. destill. 1000 parts. Of solution (1) take 1.2 parts, of (2) take 50 parts, to form (3). Mix 3 in urine in about equal quantities, and add slowly aq. ammon. towards neutralization. The deep maroon color will soon appear. Test normal urine first, or alongside suspected urine.—*Dr. A. Jacobi in Journal American Medical Association.*

Decorated by the Sultan—A New York Physician made a Commander of the Medijif.—Dr. Morris H. Henry, of No. 581 Fifth avenue, has recently received from M. Mavroyeni, the Turkish Minister at Washington, the decoration of Commander of the Medijie for distinguished contributions to medical and surgical science. Some years ago Dr. Henry discovered a method of treating diseases of the veins, and especially those which incapacitate men military services. He also devised instruments for removing the diseased and redundant portions of the tissues. Vein diseases are very common in Turkey, and until the adoption of Dr. Henry's invention large numbers of the Sultan's subjects escaped military duty because of them. The decoration is a gold cross surmounted by a crescent and a star, and is to be suspended around the neck by a red ribbon edged with green. Three years ago Dr. Henry received from the King of Greece the golden cross of the Saviour, the only decoration given by the Greek government. His Turkish decoration is the same as that presented by the Sultan to Congressman S. S. Cox and Gen. Lew Wallace, who were United States Ministers at his court.—*N. Y. Herald.*

THE amount of crude opium imported into the United States has trebled in fifteen years.—*Medical Standard.*

A CATHETER may be passed with comparative comfort through a spasmodic stricture or enlarged prostate, if a small quantity of olive oil is injected into the instrument when its point reaches the obstruction. The oil is forced through the eye of the catheter and passes on in advance of the instrument, and serves the purpose of a lubricant just at the time and place needed.—*Jour. of Reconstructives.*

DR. ASA GRAY, the greatest American botanist, we regret to record, has been stricken with paralysis, so that his life-work of authorship is ended. He returned this fall with Mrs. Gray from a visit to Europe, where he had been making researches in order to complete the volume on the Polypetalæ for the third volume of his great work, "Synoptical Flora of America." Mr. Sereno Watson will succeed Dr. Gray. He has been Dr. Gray's associate for a long time, is thoroughly acquainted with all his unfinished work, and it is hoped will carry it on without delay. Dr. Gray was a medical graduate, but was not a practitioner long enough to have identified himself with it.

TREATMENT OF MIGRAINE.—During the paroxysm, says Dr. Dutt, in the *British Medical Journal*, strong coffee is sometimes useful, and a wet bandage, tightly bound round the head, is an old and well-known remedy, as the following dialogue from Shakspeare will show:

Desdemona—Why do you speak so faintly?
Are you not well?
Othello—I have a pain upon my forehead here.
Desdemona—Faith, that's with watching, 'twill away again;
Let me bind it hard—within this hour
It will be well.

Entire abstinence from food, or only the slightest nourishment, should be recommended at this time. Copious draughts of hot water, in which a teaspoonful of carb. soda is dissolved, will mitigate the attack. The recumbent position, in a quiet room, with subdued light, is beneficial. Medicinally guarana (30 to 60 grains) and antipyrin (preferably antifebrin), in two hourly doses of 15½ grains on rising in the morning, are most useful.

Lessons from Specialists.—Specialism, no doubt, is open to great evils, and medical education should never be specialized. The man, however, who works a specialty is often in a position to work to the point alone, the only sound way of proceeding on a new track. Teaching pupils is of great advantage to the general surgeon. Lecturing on a subject which will be thrown aside as soon as the lecturer can afford to forego the emoluments of the chair, and to vacate it in accordance with some hospital rule, may not be an unmixed evil, yet it is probable that many specialists have been doing all the better for working at their subject alone, free from the honorable burden of instructing youths who often take little interest in their labors; and most assuredly the same specialists have enjoyed the advantage of freedom from uncongenial drudgery at lectures on matters of secondary importance to them. We are convinced that many a young surgeon has been prevented, through the heavy burden of tutorial duties, from devotion to original research. That everything good does not come directly out of a medical school the introduction of anæsthetics amply testifies. Dr. Ephraim McDowell, whose biography Dr. Alexander Simpson has sketched in his recent lecture published in these pages, performed a once desperate operation in a backwood town. Here, however, let us be fair to the schools, for the Father of ovariotomy had been well taught, and had also taught himself well at Edinburgh, as Dr. Simpson explained in his Introductory Lecture. McDowell's early exploits sound like the legends attributed to Eastern sages. In his youth Buddha won races and studied learned books. In his youth McDowell beat a champion foot-racer, and conned books of travel and treatises on chemistry. He left college, sought no lecture chair, but took to practice, and gained a reputation as an operator. Most interesting is it for us to note that he was 38 years old when he performed his first ovariotomy. He was then mature, and had ripened on surgery; he had worked, in fact, to the point for years. Turning to Hodge, we find that he practiced for fifteen years before taking an appointment as lecturer; but the professorship which he held for forty years was entirely congenial to his tastes; it implied the teaching of the subject which he loved, and by which he made his bread. The invention of the lever pessary was no small matter; it was the result of years of patient observation matured by a happy thought. Pessaries have been modified almost to infinity; but this fact shows how actively the study of displacements has been pursued, a fact equally demonstrated by the violent attacks against pessaries made by men of high authority. If pessaries are to be abolished, it is only by proof of their uselessness compared with other methods of treatment, and this proof must be based on further study. Some very particular persons seem to despise pessaries because they are distinguished by inventors' names; but this evil has arisen far more through the love of convenience of nomenclature than through personal vanity. The pupil and the instrument-maker, not the gynæcologist, is generally to blame.

The early struggles of Marion Sims deserve to be remembered. No man ever did so much original work untrammeled by academic duties, yet he made a bad start in life through defective academic instruction. "Our indiscretions often serve us well when our best plots do pall," as Hamlet said; and the failure of Dr. Marion Sims to cure babies with infantile diarrhœa made him throw his door-plate down a well in disgust; then he went to a medical school again for a year; thence he fled once more to the wilderness, and practiced in a little town in Alabama. His learning did him yeoman's service. He had learned to observe. In a very short time he had reformed plastic surgery, and discovered the singular phenomena associated with the genupectoral posture. Such an example should not be forgotten by those who have the advantage of education at some venerable British University, and of membership of a staff of a great hospital, with its infinite resources. Let them not find out faults in Marion Sims; no, let them excel him in his merits—if they can.—*British Medical Journal.*

Cocaine in Stricture.—A novel use of cocaine is reported in the New York *Medical Record* by Prof. Andrew H. Smith, and with results so encouraging as to justify a repetition of the practice in other similar cases. Dr. Smith recounts how, having been called in a case of retention of urine, he was unable to pass even a No. 4 catheter, this being the smallest he had provided himself with on leaving home. The stricture was situated on the membranous portion of the urethra, and urine was discharged only in drops. According to the patient's own account the obstruction was of several years' standing, but the existing retention was attributed to cold and fatigue experienced on the day preceding the attack. The method pursued by Dr. Smith in the emergency was to pass a large catheter down as far as the stricture, and then inject a few drops of a four-per-cent. solution of cocaine through the instrument. Ten minutes later the patient was able to pass his water freely, the bladder being thus emptied without any further assistance. The suggestion to employ cocaine in this connection presented itself, so Dr. Smith affirms, as the result of observing the mucous membrane of the nose under the influence of the drug, and the success achieved by it will probably encourage others to try it under like circumstances. [We warn all against using the oleate for this purpose. We have found it to cause most agonizing pain for a few minutes when injected into the urethra 10 per cent. strong.—EDS.]

THE URINE IN TABES DORSALIS.—The following facts are set forth by MM. Livon and Alezias as the result of a series of researches on the urine of patients affected with an apyrexial disease of the cord, namely, tabes dorsalis: A tendency to diminution of the urea eliminated in the twenty-four hours; a diminution in the total daily discharge of phosphoric acid, with a tendency to proportional augmentation of the discharge of earthy phosphates; a great variation in the elimination of chlorine, with a bias in favor of hyperchloruria. Intravenous injections of tabetic urines appear to be sufficiently toxic in their action, since it has been found that from twelve to twenty-four cubic centimeters of urine per kilogram of body weight of animals was sufficient to kill dogs.—*Lancet.*—*Practitioner and News.*

NOTE UPON THE LOCAL USE OF FLUID EXTRACT OF QUEBRACHO.—Mr. Bordeaux writes to the *Arckives Méd. Belges* that, according to his investigations which have been conducted within the last few years, quebracho is an energetic aid to cicatrization. Painted upon fresh wounds with a smooth edge, it produces transient stimulation and slight pain, just like collodion, and secures healing by first intention. It can also be used with good results in burns and frost-bite, if the ulcerated spots have a good ruddy aspect. The fluid extract of quebracho hardens in an hour after being painted on, and forms a dry crust resembling dried blood, which clings firmly to the tissue and can only be removed by warm water. The secretions of the wound dry up, and if the crust falls off the wound has healed, so that here healing under a scab can be properly spoken of. One great advantage of this treatment consists in the fact that all bandages may be dispensed with.—*Medical and Surgical Reporter.*

ALTHOUGH it may be said that Thompsonianism, with its "Composition" and lobelia, has long since taken a back seat, and the Pepper System of Medicine is being largely introduced.

PROF. BARTHOLOW states: "Gelseminum will often do more good in irritable bladder than any other remedy. It is especially adapted to those women of hysterical type, troubled by irritability at the neck of the bladder, calling for constant urination.—*Journal of Reconstructives.*

PINE-WOOL, made at the Acmé Fibre Works, near this city, makes an excellent dressing for wounds and for some skin diseases. It is light, balsamic, cleanly and cheap. We have written of it before, and more experience with it fully bears out our good opinion. This pine-wool is made from the needles of the long-leaf pine, and its preparation is entirely unique. We do not know if it is yet on sale, but presume that it may be had of the Acmé Company in this city.

THE SPREAD OF LEPROSY.—Within a brief period past the civilized world seems to have been awaking to a realization of the fact that, instead ef leprosy proving to be the harmless curiosity that a few years ago it was held to be, it has in truth become a dreadful menace, calling for close attention and strong defensive efforts. The *Practitioner and News* has from the first insisted that leprosy is a contagious malady, and that at any time, should telluric or epidemic conditions favor it, the world may again witness such melancholy scenes as were only too common in the middle ages. It is not necessary now to repeat arguments to prove its contagiousness. The abundant evidence of this fact, brought to light in the recent past, has silenced all opponents. It remains now only to show how extensively it is spreading, and to make known the symptoms, so that early diagnosis may enable men to guard against the danger of infection. Leprosy, perhaps the most dreadful of all diseases, may in the near future require to be combated with more perseverance than has been exhibited in the history of any other contagious disease whatever.—*Practitioner and News.*

The fluid contents of an ovarian cyst always contain cholesterine, which is never found in cystic fibroid.—*Indiana Medical Journal.*

The Use of Water at Meals.—Opinions differ as to the effect of the free ingestion of water at meal times, but the view generally received is probably that it dilutes the gastric juice, and so retards digestion. Apart from the fact that a moderate delay in the process is by no means a disadvantage, as Sir William Roberts has shown in his explanation of the popularity of tea and coffee, it is more than doubtful whether any such effect is in reality produced. When ingested during meals, water may do good by washing out the digested food and by exposing the undigested part more thoroughly to the action of the digestive ferments. Pepsin is a catalyptic body, and a given quantity will work almost indefinitely, provided the peptones are removed as they are formed. The good effects of water, drunk freely before meals, has, however, another beneficial result—it washes away the mucus which is secreted by the mucous membrane during the intervals of repose, and favors peristalsis of the whole alimentary tract. The membrane thus cleansed is in a much better condition to receive food and convert it into soluble compounds. The accumulation of mucus is specially marked in the morning, when the gastric walls are covered with a thick, tenacious layer. Food entering the stomach at this time will become covered with this tenacious coating, which for a time protects it from the action of the gastric ferments, and so retards digestion. The viscid contents, a normal condition in the morning before breakfast, is not suitable to receive food. Exercise before partaking of a meal stimulates the circulation of the blood and facilitates the flow of blood through the vessels. A glass of water washes out the mucus, partially distends the stomach, wakes up peristalsis, and prepares the alimentary canal for the morning meal. Observation has shown that non-irritating liquids pass directly through the "tubular" stomach, and even if food be present they only mix with it to a slight extent. According to Dr. Leuf, who has made this subject a special study, cold water should be given to persons who have sufficient vitality to react, and hot water to the others. In chronic gastric catarrh it is extremely beneficial to drink warm or hot water before meals, and salt is said in most cases to add to the good effect produced.—*British Medical Journal.*

BOOKS AND PAMPHLETS RECEIVED.

Report of the New York State Board of Health for 1887.

Eclectic Magazine of Foreign Literature for November. E. R. Pelton, New York.

Diseases of the Heart. Second Part. By Dujardin Beaumetz, M.D., Physician's Leisure Home Library. Geo. S. Davis, Detroit.

Sixth Annual Report of the State Board of Health of New Hampshire. Vol. VI. 1887. Manchester, John B. Clarke, 1887.

An Address at the Opening of the Memphis Hospital Medical College, October 4, 1887. By T. J. Crofford, M.D., Professor of Philosophy.

Treatise on Human Physiology, for the Use of Students and Practitioners of Medicine. By Henry C. Chapman, M.D. 8vo. Sheep. Pp. 944. Lea Brothers & Co., Philadelphia, 1887.

READING NOTICES.

G. E. MATHEWS, M.D., Ringwood, N. C., writes: "I find your Lactated Food everything you claim for it, being the very thing for infants with cholera infantum or other bowel troubles."

AN ALVINE MOTOR.—Various are the means resorted to for the relief of chronic constipation, but unfortunately most of them are, in a sense, futile since the effect is but temporary. Dr. George W. Hoagland, of Columbus, Ohio, writes that he uses "ELIXIR PURGANS" (LILLY) with the very greatest satisfaction, and cordially recommends it to other practitioners. This preparation is used extensively in Carney Hospital and the Lying-in Hospital, in this city; the Children's Hospital, New York; the New York Ophthalmic Hospital, and others, while it is held in high esteem by a large number of physicians. Dr. G. A. Jordan, of Worcester, Mass., says it is certanly the best "*alvine motor*" he has ever used, and that it gives satisfaction in every instance.—*Mass. Med. Journal.*